

AGRICULTURE IN IRAQ  
DURING THE 3<sup>rd</sup>/<sup>4<sup>th</sup></sup> CENTURY, ~~A. H.~~

b y

HUSAM QUAM EL-SAMARRAIE

Thesis submitted for the degree of  
Doctor of Philosophy  
in the University of London

LONDON, November, 1970



ProQuest Number: 10672746

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



ProQuest 10672746

Published by ProQuest LLC (2017). Copyright of the Dissertation is held by the Author.

All rights reserved.

This work is protected against unauthorized copying under Title 17, United States Code  
Microform Edition © ProQuest LLC.

ProQuest LLC.  
789 East Eisenhower Parkway  
P.O. Box 1346  
Ann Arbor, MI 48106 – 1346

ABSTRACT

The following thesis, which consists of six chapters, is concerned with the history of agriculture in Iraq during the 3rd/9th century.

The economy of the country in this century suffered from natural and political disasters, and it was also during this period. that the power of caliphate authority began to weaken.

Chapter I deals with the geographical aspect of the country, its limits and its nature. It attempts to picture the system of its canalisation, levelling, survey and maintenance. Methods of irrigation both by water devices and weirs together with the drainage and reclamation of land are taken into consideration, as is the division of Iraq which was used by the existing government to supervise agricultural growth and tax collection.

In the second chapter, aspects of tenure and production form the basis of discussion. An attempt is also made to collate the climate and conditions of work of cultivators and peasants together with a brief survey of life in the villages.

This thesis pays attention, in Chapter III, to the agricultural system, to the various methods of cultivation and the implements used. Floods, disease and pests are also considered, together with crops and their distribution.

Chapter IV is devoted to the agricultural policy of the state. This is summarised under four headings and deals with the policy of irrigation, supervision of cultivation, reforms in

tax assessment and collection and reform of the revenue calendar, and also the policy of iqta'.

The fifth chapter deals with taxation, its various kinds, etc., and its assessment and method of collection, while the sixth chapter deals with agriculture as a source of revenue. It contains various accounts which represent the revenue of the period, and an attempt has been made to summarise the expenditure of the central government and the fluctuations which it caused in the revenue.

No separate survey of the sources on which this thesis was based has been made as these have been the subject of a number of extensive studies (cf. Bibliography: Barthold, Duri, Gibb, Lewis, Rosenthal and Wellhausen).



CONTENTS

Abstract	..	..	..	..	..	..	..	..
Table of Contents	..	..	..	..	..	..	..	..
Acknowledgements	..	..	..	..	..	..	..	..
List of Abbreviations	..	..	..	..	..	..	..	..
Transliteration	..	..	..	..	..	..	..	..
CHAPTER I	The Geographical Aspects of Iraq	..						
1.	The limits of Iraq during the 3rd/9th century	..	..					
2.	The Nature of Iraq	..	..	..				
a)	The Soil	..	..	..	..			
b)	The Rivers and Swamps	..						
c)	The Climate	..	..	..				
3.	Canalisation system	..	..					
4.	Levelling, survey and maintenance							
5.	Methods of Irrigation							
a)	Water machines:							
i)	The Na'ūr	..	..					
ii)	Dūlāb	..	..	..				
iii)	Dāliya	..	..	..				
iv)	Shādūf	..	..	..				
v)	Bakra	..	..	..				
b)	Weirs, 'Qanṭaras'							
i)	Their location	..	..					
ii)	al-Qanṭara al-Kabira (as a specimen)	..						

	6.	Drainage and Reclamation .. ..
	7.	Division of Iraq .. ..
CHAPTER II		Aspects of tenure and production ..
	1.	The urban society .. ..
	2.	Production activities .. ..
	3.	The village .. ..
	a)	Health conditions in the climatic zones .. ..
	b)	The social structure of the village .. ..
	4.	Peasants and workers.
CHAPTER III		The Agricultural System .. ..
	1.	System of Rotation
	a)	Weeding .. ..
	b)	Ploughing and harrowing ..
	c)	Clod-breaking .. ..
	d)	Inversion .. ..
	e)	Sowing .. ..
	f)	Irrigation .. ..
	g)	Reaping .. ..
	h)	Preparation of Threshing-floor and bringing the harvest ..
	i)	Threshing and winnowing ..
	j)	Storing .. ..
	2.	Agricultural Calendar .. ..
	3.	Methods of cultivation .. ..
	4.	Implements .. ..

5. Pests and their extermination
6. Crops and their distribution ..
  - a) Grain and cereals .. ..
  - b) Provender .. ..
  - c) Fibres .. ..
  - d) Herbs .. ..
  - e) Fruits .. ..
  - f) Vegetables .. ..
  - g) Floral products .. ..
  - h) Timber .. ..

#### CHAPTER IV      The Agricultural Policy of the State

1. The Policy of Irrigation .. ..
2. Supervision of cultivation. ..
3. Reforms in tax assessment and collection .. ..
4. Reforms of the revenue calendar
5. The iqtā' .. ..

#### CHAPTER V      Taxation .. ..

1. Taxes
  - a) Main taxes .. ..
  - b) Additional taxes .. ..
  - c) Extrinsic taxes .. ..
2. Methods of assessment .. ..
3. Methods of collection .. ..

#### CHAPTER VI      Agriculture as a source of revenue...

#### Bibliography .. ..

### ACKNOWLEDGEMENTS

When looking back at the research undertaken to produce a thesis, it becomes the pleasure of the writer to thank all those who have contributed their help.

Firstly I should like to thank Professor B. Lewis, without whose continued encouragement and guidance all effort on my part would have fallen short of achievement.

My grateful appreciation is also due to the University of Baghdad for its facilitation of my studies; to Professors A. Duri, S. A. El-Ali for their kindness, consideration and encouragement.

To the Gulbenkian Foundation I owe gratitude for their generosity and the S.O.A.S., London University, for their necessary financial support, without which this thesis could not have been completed.

Thanks are due also to many others. Among them are the Librarians and Staffs of the School of Oriental and African Studies, together with those of the Bodleian Library and the British Museum; also to those of Uppsala University (Sweden), Bibliothèque Nationale (France), Koprüllu, Topkapi Sarayı, Süleymaniye, Garullah, Shahit Ali, Ragib Pasa, Ahmed III and Aya Sofya (Turkey).

Lastly, but certainly not least, my sincere appreciation and thanks to my wife for her unfailing patience and support and to all those colleagues and friends from whom I have received continued encouragement.

School of Oriental  
and African Studies,  
LONDON.

H. El-Samarraie

LIST OF ABBREVIATIONSa) Arabic and Persian works

<u>Abshihī</u> , <u>Mustatraf</u>	<u>al-Mustatraf min Kulli fannin</u> <u>mustazraf</u>
--- <u>Mustajād</u>	<u>al-Mustajād min fa'ilāt al-ajwād</u>
' <u>Arīb</u>	<u>Silat Ta'rīkh al-Tabarī</u> , by ' <u>Arīb al-Qurṭubi</u>
<u>Athīr</u>	<u>al-Kāmil fi'l-Ta'rīkh</u> , by Ibn <u>al-Athīr</u>
<u>Balādhurī</u> , <u>Futūh</u>	<u>Futūh al-Buldān</u>
--- <u>Ansāb</u>	<u>Ansāb al-Ashraf</u>
<u>Birūnī</u> , <u>Chronology</u>	<u>al-'Āthar al-Bāqiya 'an 'l-qurūn</u> <u>al-Khāliya</u>
--- <u>Jamāhir</u>	<u>al-Jamāhir fi ma'rifat al-Jawahir</u>
Bar Hebraeus	<u>Chronology</u>
<u>Būzjānī</u> , <u>Hāwī</u>	<u>Kitāb al-Hāwī lil a'mal as-Sultāniyya</u>
<u>Durairi</u>	<u>Ḥayāt al-Ḥayawān</u>
<u>Dhahabī</u> , <u>Duwal</u>	<u>Ta'rīkh Duwal al-Islam</u>
<u>Dimashqī</u> , <u>Ishāra</u>	<u>al-Ishāra ila maḥāsin al-tijara</u>
<u>Dīnawarī</u> , <u>Akhbār</u>	<u>Kitāb al-Akhbār at-ṭiwāl</u>
<u>Hamadānī</u> , <u>Maqamat</u>	<u>Ma amat Badī' al-Zamān</u>
<u>Ibn al-Faqih</u> , <u>Buldān</u>	<u>Kitāb al-Buldān</u>
<u>Ibn Ḥamdūn</u>	<u>Tadhkira</u>
<u>Ibn Ḥawqal</u> , <u>Sūra</u>	<u>Surat al-ard</u>
--- <u>Masālik</u>	<u>al-Masālik wa'l mamālik</u>
<u>Ibn Kathīr</u> , <u>Bidāya</u>	<u>al-Bidāya wa'l nihāya</u>

Ibn Rusteh	<u>al-A'laq al-nafisa</u>
Istakhri	<u>Masalik al-mamalik</u>
Jahiz, <u>Bayan</u>	<u>al-Bayan wa'l tabiyin</u>
-- <u>Bukhala'</u>	<u>Kitab al-Bukhala'</u>
-- <u>Dala'il</u>	<u>al-Dala'il wa'l i'tibar fi'l</u>
	<u>Khalq wa'l tadbir</u>
-- <u>Tabassur</u>	<u>al-Tabassur bi'l tijara</u>
Jahshiyari, <u>al-Wuzara'</u>	<u>al-Wuzara' wa'l Kuttab</u>
Khawarizmi. <u>Mafatih</u>	<u>Mafatih al-'Ulum</u>
al-Khatib al-Baghdadi	<u>Ta'rikh Baghdad</u>
Mas'udi, <u>Muruj</u>	<u>Muruj al-dhahab</u>
-- <u>Tanbih</u>	<u>al-Tanbih w'al-ishraf</u>
Maqrizi, <u>Kitab</u>	<u>al-Mawa'iz wa'l-i'tibar</u>
-- <u>Ighatha</u>	<u>Ighathat al-Umma</u>
Miskawih	<u>Tajarib al-Umam</u>
Muqaddasi	<u>Ahsan al-taqasim fi ma'rifat</u>
	<u>al-aqalim</u>
<u>Muruj</u>	See Mas'udi
Nasir-i Khusraw	<u>Safar nama</u>
Nuwayri, <u>Nihaya</u>	<u>Nihayat al-arab</u>
Qalqashandi	<u>Subh al-a'sha</u>
Qummi	<u>Tarikh-i Qum</u>
Qudama, <u>Nubadh</u>	<u>Nubadh min kitab al-Kharaj wa</u>
	<u>san'at al-kitaba</u>
-- <u>Kharaj</u>	<u>Kitab al-Kharaj (MS)</u>
Sabi, <u>Wuzara'</u>	<u>Kitab al-Wuzara'</u>

Sam'ānī	<u>Kitāb al-ansāb</u>
Suhrāb	<u>'Aja'ib al-Aqālīm al-Sab'</u>
Sūlī, Adab	<u>Adab al-Kuttāb</u>
Suyūṭī	<u>Ta'rīkh al-khulafā'</u>
Tabarī, Ta'rīkh	<u>Ta'rīkh al-Rusul wa'l-Mulūk</u>
-- <u>Ikhtilāf</u>	<u>Ikhtilāf al-Fuqahā'</u>
Tanukhī, Nishwār	<u>Nishwār al-Muhādara</u>
-- <u>Faraj</u>	<u>al-Faraj ba'd al-Shidda</u>
Tha'ālibī, Khass	<u>Khass al-Khass</u>
-- <u>Latā'if</u>	<u>Latā'if al-Ma'arīf</u>
-- <u>Thimār</u>	<u>Thimār al-qulūb</u>
Tabāṭaba	<u>al-Fakhri</u>
Ya'qubī, Ta'rīkh	<u>Ta'rīkh al-Ya'qubī</u>
-- <u>Buldan</u>	<u>Kitāb al-Buldan</u>
Yaqūt, Irshād	<u>Irshād al-arīb (Mu'jam al-Udaba')</u>
-- <u>Mu'jam</u>	<u>Mu'jam al-Buldan</u>
Abū Yūsuf	<u>Kitāb al-Kharāj</u>
al-Zabīdī	<u>Taj al-'arūs</u>

b. Modern worksAEAPA. Grohmann, Allgemeine Einführung  
in die Arabischen PapyriAPELA. Grohmann, Arabic Papyri in the  
Egyptian LibraryFWAPA. Grohmann, From the World of Arabic  
Papyri

- P. Rhyl Margoliouth, Arabic Papyri in the  
Rylands Collection, Manchester.
- PERF Karaback, Papyrus Erzherzog Rainer  
Führer durch die Ausstellung.  
Wien, 1894.
- BGA Bibliotheka Geographorum Arabicorum  
GAL Geshchichte der Arabischen Literatur,  
Leyden, 1898.
- c. Periodicals
- AI Ars Islamica
- AIEO Annales de l'Institute d'études  
Orientales, Paris.
- AO Ars Orientalis
- Annales ESC Annales économiques, Sociétés.  
Civilisations
- AJSL American Journal of Semitic Language  
and Literature, Chicago.
- BEA Bulletin des études arabes
- BEO Bulletin d'Études Orientales,  
Damas/Cairo.
- BCA Bulletin of the College of Art,  
Baghdad.
- BFA Bulletin of the Faculty of Arts,  
Alexandria.



<u>BO</u>	<u>Bibliotheca orientalis.</u>
<u>BSOAS</u>	<u>Bulletin of the School of Oriental and African Studies.</u>
<u>EHR</u>	<u>The Economic History Review.</u>
<u>EI</u> <sup>1</sup>	<u>Encyclopaedia of Islam, 1st edition.</u>
<u>EI</u> <sup>2</sup>	<u>Encyclopaedia of Islam, 2nd edition.</u>
<u>G.J.</u>	<u>The Geographical Journal</u>
<u>HJAS</u>	<u>Harvard Journal of Asiatic Studies</u>
<u>IC</u>	<u>Islamic Culture.</u>
<u>IQ</u>	<u>Islamic Quarterly</u>
<u>IS</u>	<u>Islamic Studies</u>
<u>JA</u>	<u>Journal Asiatique</u>
<u>JAOS</u>	<u>Journal of the American Oriental Society.</u>
<u>JAS</u>	<u>Journal of Asiatic Society</u>
<u>JCAS</u>	<u>Journal of Central Asian Society</u>
<u>JEH</u>	<u>Journal of Economic History</u>
<u>JESHO</u>	<u>Journal of the Economic and Social History of the Orient</u>
<u>JNES</u>	<u>Journal of Near Eastern Studies</u>
<u>JRAS</u>	<u>Journal of the Royal Asiatic Society</u>
<u>JSS</u>	<u>Journal of Semitic Studies</u>
<u>JQR</u>	<u>Jewish Quarterly Review</u>
<u>REI</u>	<u>Revue des études Islamiques.</u>
<u>RHES</u>	<u>Revue d'histoire économique et sociale</u>
<u>RSO</u>	<u>Rivista degli Studi Orientali</u>

SIStudia IslamicaSOStudia OrientaliaZDMGZeitschrift der Deutschen Morgenländischen  
Gesellschaft

TRANSLITERATION

The system adopted in this thesis, which differs a little from that adopted in the Encyclopaedia of Islam, is as follows:

ā =	آ	ḡ =	غ
b =	ب	t =	ط
t =	ت	ẓ =	ظ
th =	ث	c =	ع
j =	ج	gh =	غ
ḥ =	ح	f =	ف
kh =	خ	q =	ق
d =	د	k =	ك
dh =	ذ	l =	ل
r =	ر	m =	م
z =	ز	n =	ن
s =	س	ū, w =	و
sh =	ش	h =	ه
ṣ =	ص	ʿ =	ع
		ī, y =	ي

## Chapter I

### THE GEOGRAPHICAL ASPECT OF IRAQ

#### The Limits<sup>1</sup> of Iraq during the 3rd/9th Century

A great deal of argument seems to have arisen between the jurists concerning the acquisition of lands in Iraq.

The entire controversy centres upon those parts of Iraq which were captured by force and those which were peacefully acquired. It is important from a logical point of view, at least, to clarify this because of the relevant principles governing such ownership. In the case of land captured by Muslims it was considered 'fay' land which, theoretically, belonged to the whole Muslim community and was known as Kharāj land.

From this rose the question of the right to cultivate and the amount of tax to be levied from it. On the other hand, the land conceded peacefully was considered Sulh land and remained in the possession of its owners who paid only that amount of tax which was assessed according to the treaty of the Sulh.<sup>2</sup>

Jurists differ concerning the identification of Kharāj and

<sup>1</sup>The word "Limits" as used by Arab geographers indicated "the end of a certain country", ibn Khurradadhbey, Kitāb al-masālik wa'l-mamālik, p.1, ed. de Goeje, Leiden, 1889; or the "ends of a province or area", ibn Hawqal, Kitāb al-Masālik wa'l-mamālik, pp. 209, 210, 235, ed. de Goeje, Leiden, 1873; Yāqut, Mu'jam al-Buldan, v.III, p.135, refers to area outside which its tax-collectors had no authority.

<sup>2</sup>Tabarī, Ikhtilāf al-fuqahā', pp. 218-222, 224; Balādhurī, Futūh al-Buldan, pp. 447-448, 453; Abu Yūsuf, Kitāb al-Kharāj, p.95; Abu 'Ubaid, Kitāb al-amwāl, nos. 141-71; Yahya ibn Adam, Kitāb al Kharāj, pp. 6-7, 23.

Sulh tracts of land, which indicates the necessity to clarify the boundaries of Iraq, and Arab geographers' works are valuable in this connection.<sup>1</sup>

In addition there is the question of the extent of each parcel of land together with its waterways and rivers. This was, perhaps, why a great deal of information about Iraq was produced. Even the Arab geographers were of differing opinions concerning those lands which were Kharāj and which were Sulh, and their uncertainty reflects, perhaps, the differences among the jurists. The Sawād of Kufa, for instance, was considered as Kharāj land both by Iṣṭakhri and Ṣābi,<sup>2</sup> and al-Khaṭīb al-Baghdādī produces information supporting this view, while Muqaddasī considers it as Sulh.<sup>3</sup>

Arab geographers, however, divide the great lowlands, which the Greeks called Mesopotamia, into two main provinces. The upper province, which contains the hard and stony plains, was called al-Jazīrah; and the lower province, consisting of the rich and alluvial lands known to the ancients as Babylonia, was named al-ʿIrāq. Unfortunately, the data given is insufficient and not definite enough to trace the limits of those provinces with complete accuracy. The term al-Sawād, which geographically almost

---

<sup>1</sup> Ibn Khurraḍādhbeh, op.cit., p.14; Iṣṭakhri, Kitāb al-Masālik wa-l-mamālik, pp. 78-79.

<sup>2</sup> Iṣṭakhri, ibid., p.80; Ṣābi, al-Wuzarāʾ, p.309; Dūrī, Tārīkh al-ʿIrāq al-iqtisādi fi al-qarn al-rābiʿ al-Hijrī, Baghdad (1948), p.191.

<sup>3</sup> Muqaddasī, Ahsan al-taqāsīm fī maʿrifat al-aqālīm, p.133.

corresponds with al-‘Irāq was, however, used by them.<sup>1</sup>

Al-Sawād refers in fact to the special kind of fertile land which constitutes nearly the whole of ‘Irāqi territory. Later the term "sawād" was used to mean "the district round the city"; hence the geographers mention Sawād Baghdād, Sawād al-Basrah, Sawād al-Kūfa, Sawād Wasiṭ, Sawād Surra-man-ra‘a and Sawād al-Anbār. Here it is abundantly clear that the meaning of "Sawād" is a particular district round each of these cities in al-Sawād or al-‘Irāq. The term was not used to describe any district outside the limits of al-‘Irāq.

Ibn Khurradādhbeh (250 A.H./864 A.D.) states that al-Sawād extends from al-‘Alath and Ḥarba in the north to the Persian Gulf in the south, and from Ḥulwān in the east to ‘Udhāib al-Qādisiya in the west.<sup>2</sup> These limits of the Sawād are geographers in the following century; they assign to ‘Irāq the same limits of al-Sawād with the exception of the northern side.<sup>3</sup> Mas‘ūdī states that the limits of al-Sawād are exactly those of al-‘Irāq; this indicates that the same province has been given two names.<sup>4</sup>

<sup>1</sup>Ibn Khurradādhbeh, op.cit., p.14; ibn Rusteh, Kitāb al-‘Irāq al-nafīsa, pp. 101-105; Iṣṭakhrī, op.cit., pp. 78-9; Mas‘ūdī, al-tanbīh wa-l-‘ishrāf, p.38; ibn Ḥawqal, op.cit., p.234.

<sup>2</sup>Ibn Khurradādhbey, op.cit., p.14.

<sup>3</sup>Iṣṭakhrī, op.cit., pp. 78-9; ibn Rusteh, op.cit., pp. 104-5; Mas‘ūdī, Tanbīh, p.38; ibn Ḥawqal, op.cit., p.234.

<sup>4</sup>Mas‘ūdī, Tanbīh, p.38.

Iṣṭakh̲rī (318-321 A.H./930-3 A.D.) said that al-‘Irāq extended from Takrīt in the north to ‘Abbādān on the Persian Gulf in the south, and from Ḥulwān in the east to Qādisīyat al-Kūfa in the west. Moreover, he described the central part of al-‘Irāq as extending from Wāsīt to al-Ṭīb, the northern part from Samarra to Shahrazūr, and the southern part from al-Basra to the limits of Jubbā.<sup>1</sup> Ibn Ḥawqal (367 A.H./977 A.D.) repeats Iṣṭakh̲rī's definition of the limits of al-‘Irāq.<sup>2</sup> Muqaddasī (387 A.H./997 A.D.) considers the line from al-Anbār to al-Sinn as the northern limit of al-‘Irāq.<sup>3</sup>

The limits between al-‘Irāq and al-Jazīrah varied during different epochs. According to Ibn Khurraḍādhbeh it commenced from twelve farsakhs above al-Sinn on Tigris to Ḥaditha on the Euphrates.<sup>4</sup> Iṣṭakh̲rī and Ibn Ḥawqal considered the northern limits of ‘Irāq to generally coincide with a line going north from al-Anbār on the Euphrates to Takrīt on the Tigris; both cities were considered as belonging to ‘Irāq.<sup>5</sup>

To summarise and conclude; ‘Irāq - consisting of al-Sawād and the Baṭā’ih, was limited by a line starting from ‘Abbādān on the Persian Gulf and running northward to Jubbā, al-Ṭīb, Ḥulwān and al-‘Alath; thence, between 3-4 farsakhs above al-‘Alath north-westwards to Ḥaditha on the Euphrates, from thence southwards to al-Anbār and ‘Udhāib al-Qadisiya, and continues along the western bank

---

<sup>1</sup>Iṣṭakh̲rī, op.cit., p.79.

<sup>2</sup>Ibn Ḥawqal, op.cit., p.158.

<sup>3</sup>Muqaddasī, op.cit., p.134.

<sup>4</sup>Ibn Khurraḍādhbeh, op.cit., p.93.

<sup>5</sup>Iṣṭakh̲rī, op.cit., p.71; ibn Ḥawqal, op.cit., pp. 208-9.

of the Euphrates, turns eastwards to include the Baṭā'ih, to al-Basra and the Persian Gulf opposite 'Abbādān.

### Nature of al-'Irāq

Al-'Irāq is a gift of its two rivers, the Euphrates and the Tigris. Its lands, excluding al-Baṭā'ih, are rich alluvial plains at a height of 50-100 feet above sea level.<sup>1</sup> The Arabian desert comes close to the western border of the Euphrates, so that this river has no right bank affluents.<sup>2</sup> The Tigris, on the other side, is completely different. The highlands of Persia follow a line standing back at a considerable distance from the eastern side of this river. This area, which lies between the Persian highlands on the east and the Tigris on the west, forms one of the richest in 'Irāq, and, although the eastern end of it (i.e. Astan Shādh Fayrūz) depends either on rains or on wells for irrigation, the larger part is well-irrigated by the Qaṭūl al-a'lā al-Kisrawī canal and its sub-channels.

The richest and largest cultivated area of 'Irāq, however, lies between its two rivers to the west and south of Baghdad and to the north of the swamps. This area is irrigated by a system of canalization which connects the lower course of the Euphrates with the Tigris and makes this alluvial plain one of the most fruitful parts of the East.<sup>3</sup> It is soft and almost flat; the

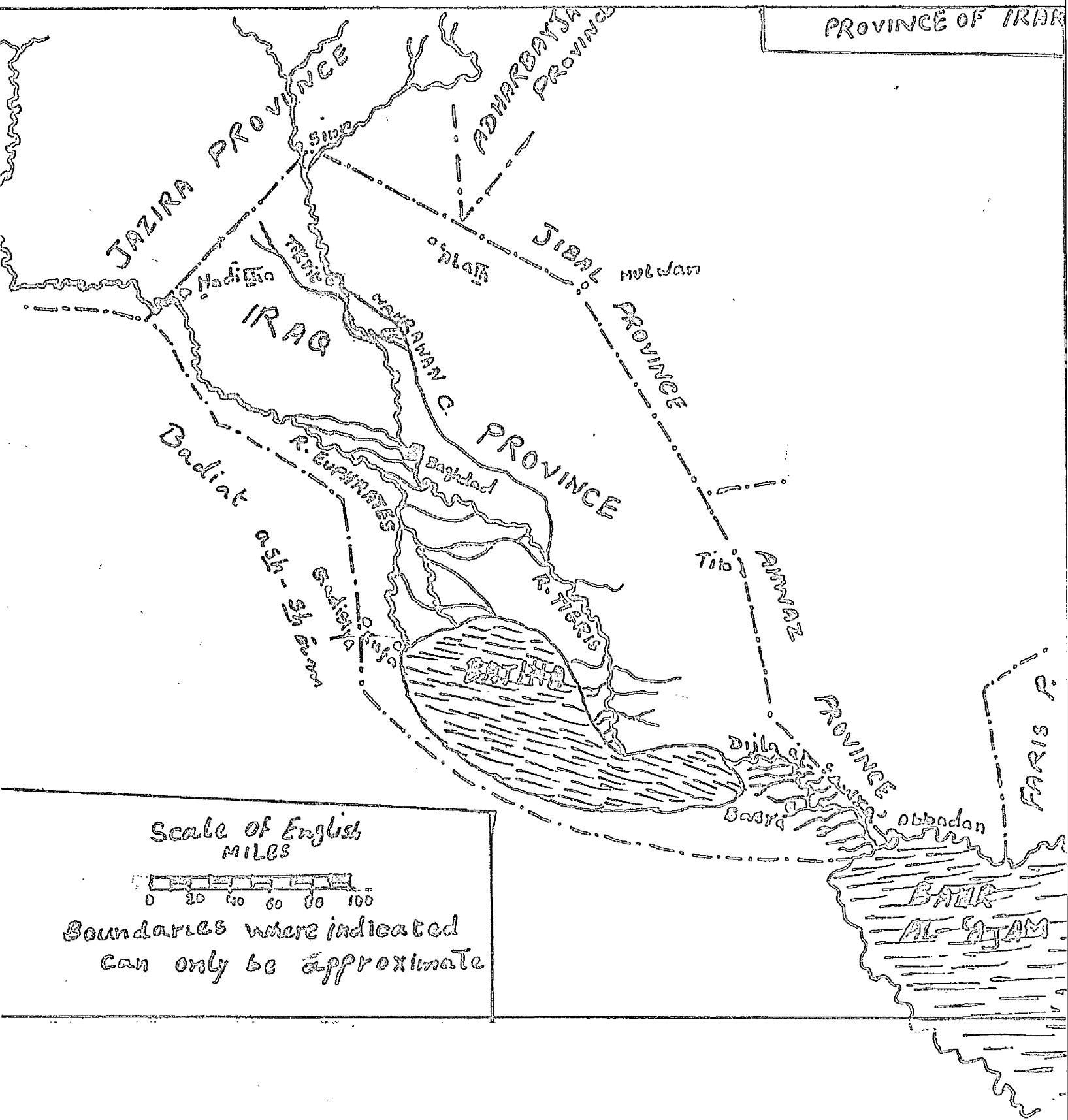
---

<sup>1</sup> Le Strange, The Lands of the Eastern Caliphate (1930), pp. 11, 24-25; Hāshimī, Mufaṣṣal Juġhرافیāt al-'Irāq, Baghdad (1930), p. 34.

<sup>2</sup> Ibn Hawqal, op.cit., p. 164.

<sup>3</sup> Le Strange, Baghdad, pp. 47-48.





river beds are shallow and exposed to rapid silting, and the banks are soft and low. The flood waters, therefore, overflow the banks easily, and as the floods are recurrent, the rivers have changed their courses creating the great swamp, known as al-Baṭiḥa.<sup>1</sup>

The Baṭiḥa (Plur. Baṭā'ih) is a name applied by the Arab geographers, particularly those of the Abbasid period, to this very extensive swampy area on the lower courses of the Euphrates and Tigris between al-Kūfa and Wasiṭ in the north and al-Basra in the south.<sup>2</sup> In the north-west, al-Baṭā'ih extended almost to Kūfa and Nifār; in the north east it started at al-Qaṭr, which was a small village at a considerable distance from Wasiṭ, on the Tigris.<sup>3</sup> In Hudūd al-'ālam and in the Masālik of Ibn Ḥawqal, information is found which only concerns the northern and southern limits of the same marshland.<sup>4</sup>

Suhrāb enumerates four of the great lagoons: -- Baḥaṣṣa, Baḥmaṣa, Baṣriyathā and al-Muḥammadiyah, which last -- as he said -- was the largest of them all.<sup>5</sup> These lagoons of open water, clear

---

<sup>1</sup> Idem, The Land of the Eastern Caliphates, pp. 26-9; cf. EI<sup>1</sup>, s.v.

<sup>2</sup> Ibn Rusteh, op.cit., p.185; Le Strange, The Land of the Eastern Caliphates, p.26.

<sup>3</sup> Suhrāb (ibn Serapiun), Kitāb 'ajā'ib al-'aḳālim al-Sab'a, Leipzig (1929), pp. 118-9; ibn Kharradadhbeh, op.cit., p.59; ibn Rusteh, op.cit., p.185; Mas'ūdī, Muruj, v, I, p.228; Iṣṭakhri, op.cit., pp. 81-82; ibn Ḥawqal, op.cit., pp. 238.

<sup>4</sup> Hudūd al-'ālam, p.26.

<sup>5</sup> Suhrāb, op.cit., p.135; Le Strange, The Lands of the Eastern Caliphates, p.42.

of reeds, were called Hawr or Ḥawl by the Arabs.<sup>1</sup> Each Hawr had plenty of water without reeds, but each was linked to the other by a narrow passage of reeds. Beyond the Hawr al-Muḥammadiyah came the channel passing the villages of al-Ḥalah and al-Wawānīn and ending in the Nahr abī'l-'Asad. This finally carried the waters of al-Baṭā'ih and several canals to the head of Dijlah al-'Awra' river (one-eyed Tigris).<sup>2</sup>

Ibn Rusteh says that the Baṭā'ih spreads over 30 farsakhs (about 107 m. = 172 kms.) in length and the same in width.<sup>3</sup> Mas'ūdī estimated the total of the Baṭā'ih as 50 x 50 farsakhs.<sup>4</sup> In his accounts of al-Ṣulāyq, an important town in the Baṭā'ih, Muqaddasī mentioned one Baṭīḥ of about 40 farsakhs<sup>5</sup> (about 143 m. = 223 kms.), Le Strange, who made a recapitulation of the evidence of the Arab geographers, says that throughout the middle ages, the Great Swamp (i.e. Baṭā'ih) covered 50 miles across its width and very nearly 200 miles in its length.<sup>6</sup>

In fact, in the area of al-Baṭā'ih, hydrography could not be static, especially since the canals and the irrigation system

---

<sup>1</sup> Suhrāb, op.cit., p.135; ibn Rusteh, op.cit., p.185.

<sup>2</sup> Suhrāb, op.cit., p.135.

<sup>3</sup> Ibn Rusteh, op.cit., p.94.

<sup>4</sup> Mas'ūdī, Murūj, v, I, p.226.

<sup>5</sup> Muqaddasī, op.cit., p.119.

<sup>6</sup> Le Strange, The Lands of the Eastern Caliphates, p.26.

were subject to change according to the height of the floods of the two rivers and the financial and political situation in 'Irāq.<sup>1</sup>

Although water covered most of the land of al-Baṭā'ih, there were some sparse patches of dry land within the marshes which had good soil. It was cultivated and cities, villages and hamlets were formed. Canals for irrigation were also dug.<sup>2</sup>

Ibn Rusteh describes the Baṭā'ih as everywhere covered by reed-beds, intersected by water channels, where immense quantities of fish were caught; these, after being salted, were despatched to all neighbouring provinces.<sup>3</sup>

Passage through the Baṭā'ih was only possible by navigating narrow channels, but the level of the water was too shallow for the ordinary river boats. Only special kinds of skiffs, called Mashḥouf, propelled by poles known as Mardī or Madrī (the plural of which is Marādi or Madārī) were able to be used.<sup>4</sup>

Sawād al-Basra, however, formed the last cultivated area in 'Irāq. It extended on both sides of Dijla al-'Awra' river and had a special irrigation system. The tide was one of the principal factors of the irrigation because twice in every 24 hours it helped to raise

<sup>1</sup> EI<sup>2</sup>, art. "Baṭiḥa"; Duri, Ta'rīkh al-'Irāq al-iqtisādī, p.9.

<sup>2</sup> Muqaddasī, op.cit., p.119; al-Sam'ānī, Kitāb al-ansāb. S.A. "Baṭā'ih"; Le Strange, The Lands of the Eastern Caliphates, p.41.

<sup>3</sup> Ibn Rusteh, op.cit., p.185.

<sup>4</sup> Istakhārī, op.cit., pp. 81-82; ibn Rusteh, op.cit., p.185; Ibn Hawqal, op.cit., pp. 238-9; also Muqaddasī, op.cit., p.19.

the level of water in Dijla al-<sup>ʿ</sup>awrā<sup>ʾ</sup> with the result that it was distributed automatically throughout several canals and sub-canals on both sides of this river. This served to cultivate the Palm and other orchards which were extensive and prolific in that area.

Slowly and effectively these same tides built up a high percentage of salt throughout the extensive irrigation system.<sup>1</sup>

Dijla al-<sup>ʿ</sup>awrā<sup>ʾ</sup> was considered to be the main drainage channel, although it drew its waters from the two Iraqi rivers, Tigris and Euphrates, and from the large marshland area of al-Baṭā<sup>ʾ</sup>iḥ. The sources refer to the Sibākḥ (s. = Sabkha) and these were the uncultivated areas formed by the accumulation of the salt deposit, and the inhabitants sometimes used such land to cultivate special crops which were able to be raised under the special conditions, or, in spite of large amounts of money and effort such a process would cost, it was washed and made arable, or else, cultivation was abandoned and concentration given to the production of salt.<sup>2</sup>

The <sup>ʿ</sup>ajām (s. <sup>ʿ</sup>Ājama) of Baṣra, however, is another term which refers to cultivateable land in the swampy area to the north of Baṣra. Such land was covered by shallow water from the surrounding swamps during the periods when the water levels rose. These areas were either used as rice-fields or were reclaimed by the use of dam

---

<sup>1</sup>Muqaddasī, op.cit., p125.

<sup>2</sup>Ṭabarī, Annals, III, 1742; cf. EI, art. "Zandj"

protection.<sup>1</sup> It is perhaps worthy of mention here that the desert comes close to the Basra area on the western side of Dijla al-'Awra' and leaves no intermediate area between the cultivated area and the desert to the west.

During the 3rd century A.H. (9th A.D.) the climate of Iraq was probably similar to that of today; only the larger area was under cultivation. The great number of palm orchards may have mitigated the violence of the winter winds and prevented the occurrence of the sand-storms that now sweep all over the country.

Throughout Iraq, there are two pronounced seasons, summer and winter. Spring and autumn are very short. Summer begins in May and lasts until October; the heat is intense, the sky cloudless, the atmosphere dry and rain extremely rare. The prevailing north-west wind (the Shamāl) is strong by day but lulls to a breeze or drops altogether at night. Though a hot wind, it brings relief because of its dryness. Autumn is more marked in the north than in the south of the country, but the season is everywhere very short. Winter comes suddenly and lasts from November to April and north-west winds still prevail. They are weaker then, however, and are frequently interrupted by depressions from the Mediterranean. In front of the south-east winds (the Sharqī) are blown cloudy skies and rain and cold. The rainfall in this season averages about

---

<sup>1</sup> "وفي حدود البصرة بين اضعاف قراها آجام كثيرة و بطائح اكثرها يسار اليها بالمدارى قريبة القمر كأنها كانت على قديم الزمان ارض مكشوفة"

5 inches, but during some winters the average is greater. Temperature lower greatly during the night and humidity rises. Frosts may occur during any of the five winter months (November to March) anywhere in Iraq, except perhaps in the southern parts. Frosts coming after rain accompany the cold winds following in the wake of the depression. Snow has been known to lie on the plains for several days. Spring, which arrives during April, is almost as fleeting as Autumn. It lasts for less than a month and brings a slight rainfall, generally accompanied by thunder. In it grass springs up with a fresh dry greenness.<sup>1</sup>

After sundown, the temperature falls rapidly and the change from summer to winter is equally sudden. Humidity is low in summer and high in winter; much higher in the early morning than later in the day. This is the natural consequence of the fluctuation of the temperature and, although it differs in various degrees of latitude, similar conditions persist throughout Iraq.<sup>2</sup> In spite of heavy rains at certain periods, the complexity of the climate and its extremes of heat and cold, added to the fact that the rains seem to be wrongly timed, and insufficient to give constant irrigation, the inhabitants seem to have solved the problem by the construction of irrigation canals. The population therefore,

---

<sup>1</sup>Bowen, The Life and Times of 'Ali Ibn 'Isa, p.23; Naval Intelligence Division, Iraq and Persian Gulf, Oxford (1944), pp.145-166.

<sup>2</sup>Ibid.

remains close to the canals and river-banks and the distribution of cities and villages follows the pattern of limitation.<sup>1</sup>

Moreover, according to Qadāma, the pasture-lands are very abundant, but the duration of verdure upon them is short and conditions for cattle-breeding are not ideal.<sup>2</sup>

Adams suggests that, from the most ancient times, the sharp division of the seasons has influenced the life of the inhabitants of Iraq. He also suggests that the changing fortunes of its people, both politically and culturally, are affected by the unusual climatic conditions.<sup>3</sup>

The official record of the Government of Iraq concerning the seasonal rhythm, as recorded at Baghdad, is given below:<sup>4</sup>

The Tigris and the Euphrates are the arteries not only of Iraq, but of the whole of Mesopotamia. Upon them depends the fertility of most land in Iraq, especially that in the region of al-Sawād. Irrigation depends upon the canals fed by both rivers and the location of the canals depends on their courses, the water-level in each and the height of their banks.

There are several references to floods during the 3rd/9th century. For example, Ibn al-Athīr mentions that in 205 A.H. (820 A.D.)

<sup>1</sup>Durī, Tā'rikh al-'Irāq al-iqtisādī, p.8; Hashimī, op.cit., p.34; Hamada, al-nizām al iqtisadi fi l 'Irāq, p.19.

<sup>2</sup>Qadāma, op.cit., p.240.

<sup>3</sup>Adams, Land Behind Baghdad (1965), p.4.

<sup>4</sup>Government of Iraq, Development Board, Section No. 2 (1959), pp.4-5.



T A B L E (i)

Temperature, Precipitation and relative Humidity at Baghdad  
(1937 - 1956)

Month	Mean Max.	Mean Min.	Mean	Mean Rainfall in mm.	Mean Relative Humidity
Jan.	15.7	4.1	9.4	23.4	69
Feb.	18.4	7.4	11.7	29.0	62
March	21.9	8.9	15.5	28.8	55
April	28.8	14.3	21.5	13.6	46.
May	35.8	19.6	27.4	3.3	31
June	40.8	22.9	31.9	tr. (ii)	23
July	43.3	25.0	34.2	tr.	23
Aug.	43.3	24.7	33.6	tr.	24
Sept.	39.7	20.9	30.1	0.1	28
Oct.	29.4	17.5	24.0	3.1	36
Nov.	24.7	10.5	16.6	19.0	56
Dec.	17.4	5.3	10.6	28.0	73

(i) Government of Iraq, Department Board, 1958, Sect. 2, pp. 4-5; Report No. 2, London, Sir M. MacDonald and Partners Ltd.

(ii) tr. = trace

the river Tigris flooded many quarters of Baghdād.<sup>1</sup> In 206 A.H./ 821 A.D., the same river flooded the area of Sawād, Baghdād, Kaskar and Qaṭī' at Umm Ja'far, and ~~that~~ due to this the agricultural product in those areas was lost.<sup>2</sup> In Dhu'l-hijjah 215 (January 831), according to Ṭaifūr, the Tigris was in flood and the water overflowed the mills of the Ṣarāt canal; the bridges of Baghdād collapsed and a few days later more floods occurred.<sup>3</sup> In 232 A.H. (846 A.D.), according to ibn al-Aṭhīr, the Tigris again flooded, the Sūq al-Arbi'a' canal overflowed, flooding al-Rabaḍ and many of the Sūqs (i.e. markets).<sup>4</sup>

In his Annals, Ṭabari says that in 271 A.H. (884-5 A.D.), the western bank of Nahr-ʿIsā (ʿIsā canal) broke its banks at al-Yasiriyah, flooding Sūq al-Dabbāghīn (tinning market) and Sūq Aṣḥāb al-Ṣāj (toak-wood market), and some 7,000 houses were destroyed.<sup>5</sup>

Many Arab geographers agree that the Great Swamps (i.e. the Baṭa'ih) were formed by the floods of the two rivers.<sup>6</sup> They also mention that flooding was the chief reason for the change in the

<sup>1</sup>Ibn al-Aṭhīr, al-Kāmil, v.VI, p.149.

<sup>2</sup>Ibid., vol. VI, p.156.

<sup>3</sup>Ṭaifūr, Kitāb Baghdād, pp. 262-263.

<sup>4</sup>Ibn al-Aṭhīr, vol. VII, p.14.

<sup>5</sup>Ṭabari, Annals, III, p.2105.

<sup>6</sup>Balādhurī, Futūḥ al-buldān, p.292, Qudāma, op.cit., pp. 236, 240-1; Suhrāb, op.cit., p.135; ibn Rusteh, op.cit., p.94; EI<sup>2</sup>, art. "Baṭiḥa", also Le Strange, The Lands of the Eastern Caliphates, pp. 26-27; Duri, Ta'rikh al-Iqtisādī, pp. 6-9.

courses of both the Tigris and the Euphrates.<sup>1</sup> There appears however, to be no reference to any changes in the courses of the two rivers during the 3rd/9th century.

The level of the water in the Tigris between Baghdād and Mādhāriya (the modern Kūt al-‘Imāra) is lower than that of the Euphrates between al-anbār and Nīfār.<sup>2</sup> This probably accounts for the existence of a number of canals, which drain eastwards into the Tigris. This was, of course, most beneficial to all the lands of al-‘Iraq north of the Baṭa’ih, while to the east of the Tigris a canal, 200 miles in length and known as al-Qaṭūl al-‘aq‘lā’ al-Kisrawl (and sometimes called the Nahrawān or Tāmarrā) served the same useful purposes. This canal started from the eastern bank of the Tigris north of Sāmarra and re-entered the river in Mādhārāyā, fifty miles north of Wasit, thus assisting the fertility of the lands on the eastern side of the Tigris.

The rest of the Iraq land, which lies between Mādhārāyā in the north and the Persian Gulf in the south, was irrigated by the waters of both the Tigris and the Euphrates, either directly or through canals flowing westward from the Tigris below Fām al-Ṣulḥ to Qaṭr (or al-Qaṭr) on the north-east limits of the Baṭa’ih, and another group of them flowing eastward and westward from Dijla al-‘Awra’ in the area of Baṣra.<sup>3</sup>

---

<sup>1</sup>Mas‘ūdī, Murūj, I, p.227; ibn Rūsteh, op.cit., p.94.

<sup>2</sup>al-Hashimī, op.cit., p.147.

<sup>3</sup>Suhrāb, op.cit., pp.135-6.

This information is derived largely from two contemporary sources, namely Suhrāb (or Ibn Scrapion) and Ibn Khurrahādhbeh. Suhrāb, who died about 900 A.D., devotes himself to tracing the network of rivers, canals and marshes. He provides the most detailed description among those of the Arab geographers.<sup>1</sup> Ibn Khurrahādhbeh has left classified information concerning the 'four irrigation areas' of Iraq.<sup>2</sup>

Ya'qūbī, who was writing at about the end of the 3rd century A.H., and Qudāma, who wrote (approximately) during the thirties of the 4th century A.H., and some information on this subject.<sup>3</sup> Other, but not very detailed information, was given by Istakhrī, ibn Hawqal and Muqaddasī.<sup>4</sup> Khatīb al-Baghdādī's Ta'rikh Baghdād (History of Baghdad) written about 450 A.H. (1058 A.D.), contains many full and interesting details concerning the sub-canal of Baghdad in both the western and eastern quarters of the city.<sup>5</sup> There is further information concerning the Euphrates and the Tigris, together with pictures of the systematic canalisation of Iraq given during different later periods, especially those given

---

<sup>1</sup> Ibid., pp. 117-138.

<sup>2</sup> Ibn Khurrahādhbeh, op.cit., pp. 5-8.

<sup>3</sup> Ya'qūbī, op.cit., p.244; Qudāma, op.cit., pp. 234-6, 240-42, (MS.KK.) fol. 88a.

<sup>4</sup> Istakhrī, op.cit., pp. 75-84; ibn Hawqal, op.cit., pp. 155-169; Muqaddasī, op.cit., pp. 119-120, 133-135; information was also given by Balādhurī, Futuh, p.292, Mas'ūdī, Muruj, vol. I, p.227, and ibn Rusteh, op.cit., pp. 93-96, 104-107.

<sup>5</sup> al-Khatīb al-Baghdādī, Ta'rikh Baghdād, vol. I, pp.110-115.

by many Jewish travellers who visited Iraq. Among them were Benjamin of Tudela, who visited Iraq in 555 (1160 A.D.), Rabbi Petachia of Ratisbon, whose visit was between 1170 and 1187 A.D., and Rabbi Jacob, the messenger of Rabbi Jechiel of Paris, who made his visit between 1238 and 1244 A.D.<sup>1</sup> Since these travellers were devoted to the enumeration of the settlements of their co-religionists in Babylonia, their information concerning the geographical aspect is broad and general.<sup>2</sup>

Ibn Jubayr, the Spanish Arab traveller, who visited Iraq in 518 A.H. (1185 A.D.) was then on his way back from Mecca. He travelled up the great Kūfa highway from the south and devoted many pages to what he saw on his way from Kūfa to Baghdād. He was especially interested in the two rivers and the three canals, Sūrā al-a'la, al-Malik and Šaršar.<sup>3</sup>

Yaqūt also, in about the year 623 A.H. (1226 A.D.) gave much valuable information about these same rivers and canals in various articles of his book.<sup>4</sup> Studies of the following authors such as Le Strange, M. Streck, E. Horsfield, W. Willcocks, together with A.D. Dūrī, S.A. el-'Alī, S.H. Longrigg, R. Hartmann and R.H. Adams also contribute welcome information.<sup>5</sup>

---

<sup>1</sup> Adler, Jewish Travellers, London (1930), pp. xiv, xv, xix, 38-63, 64-91, 128.

<sup>2</sup> Le Strange, Baghdad, p. 332.

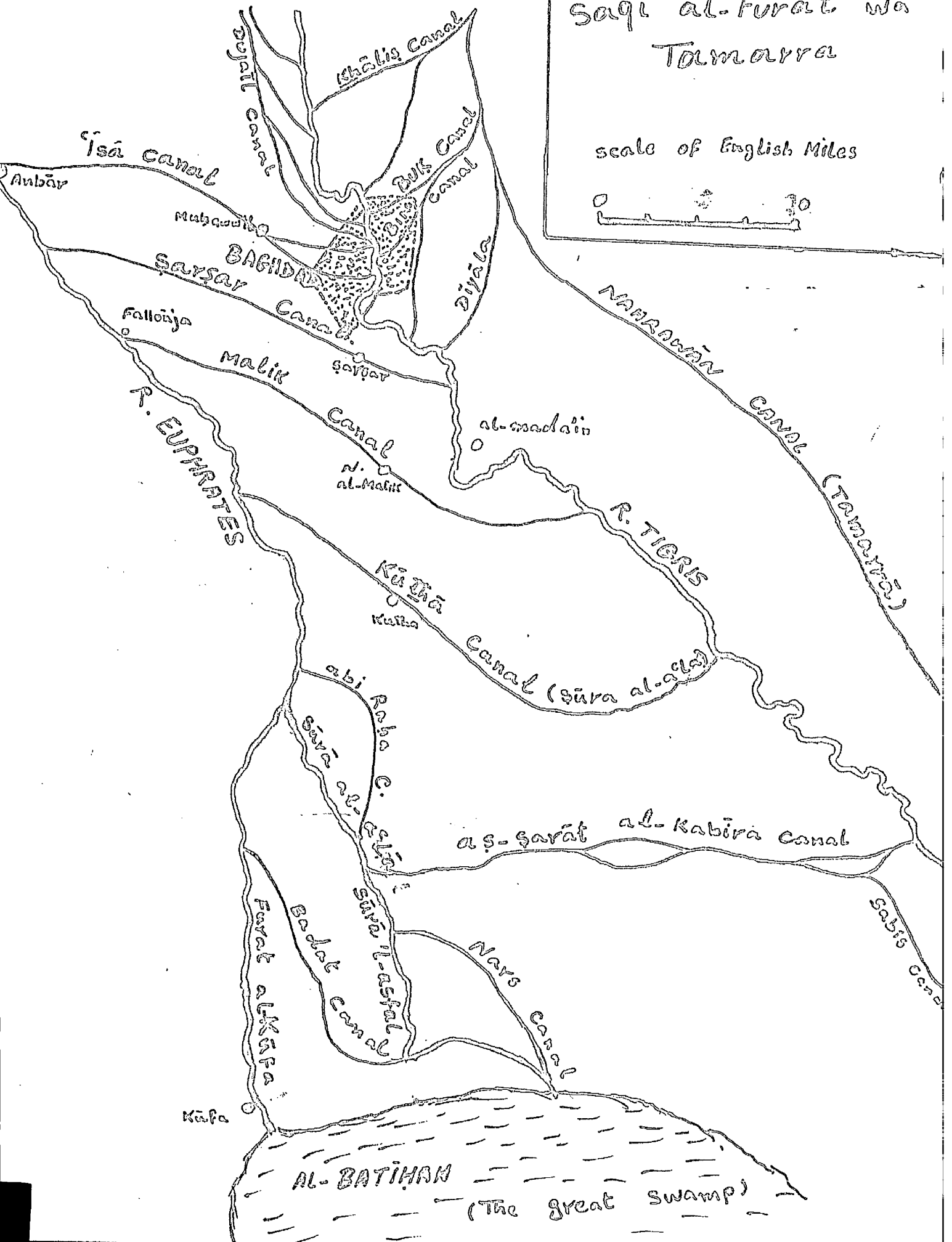
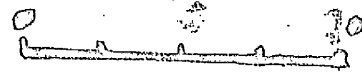
<sup>3</sup> Ibid., pp. 333-4.

<sup>4</sup> Ibid., pp. 334-6.

<sup>5</sup> EI<sup>2</sup>, art. "Baṭīḥa", "Dijla", "Diyālā"; Le Strange, Lands of the Eastern Caliphates, pp. 26-7, 79-81, Baghdad, ch. IV, pp. 47-57.

# Saqi al-Furat wa Tamarra

scale of English Miles



The information given by Suhrāb is much fuller than that given by Ibn Khurradādhbeh who conceives the irrigation of Iraq as composed of four units and provides a clearer picture of its structure. The following pages contain a summary of the irrigation system of Iraq, drawn from the works of Suhrāb and Ibn Khurradādhbeh. The Sawād was divided into four irrigation parts:<sup>1</sup>

- i) The first part extended to the east of the Tāmarrā canal, between Ṣulā and al-Nahrawān bridge; actually what he refers to as Tāmarrā was referred to as al-Qaṭūl al-A'lā al-Kisrawī by Suhrāb.<sup>2</sup> Moreover, it would appear that this same canal was known by different names as it passed through different areas. At ṣulā and Ba'qūbā the name of the upper canal changed to Tāmarrā under which name it passed on to Bājisrā and the Jisr al-Nahrawān city (Nahrawan bridge) and beyond that city was recognised as the Nahrawān canal.<sup>3</sup> It can be said that all the land of Kurat Astān-Shādh Fayrūz (or Hulwān) depended on rains or water-wheels for fertilisation with the exception of that irrigated by the Tāmarrā canal.<sup>4</sup> It would be interesting to know why Le Strange misses this point in his valuable study of Iraq.<sup>5</sup>

---

<sup>1</sup> Ibn Khurradādhbeh, op.cit., pp. 5-8; Dūrī, op.cit., p.12.

<sup>2</sup> Suhrāb, op.cit., p.127.

<sup>3</sup> Ibid., pp.127-8.

<sup>4</sup> Ibid., p.127; Qudāma, op.cit., p.234; ibn Khurradādhbeh, op.cit., pp. 5-6.

<sup>5</sup> Le Strange, The Lands of the Eastern Caliphates, ch. V, pp. 79-81.

- ii) The second area which Ibn Khurradādhbeh named as Saqī Dijla wa Tāmarrā (land irrigated by the Tigris and the Tāmarrā canal), extended to the west of Tāmarrā canal and lay between it and the Tigris in the west.<sup>1</sup> While Ibn Khurradādhbeh describes this area as being three administrative districts or Astāns (which will be described later), Suhrāb gives a detailed description of the geographical areas irrigated by both the Tigris and Tāmarrā canal in this part.<sup>2</sup>

The three districts given by Ibn Khurradādhbeh were Shādh-Hurmuz, Shādh-Qubādh and Bāzījān-Khuzraw (or al Nahrawān) and together total twenty Tassūjs (sub-districts).<sup>3</sup>

Subrāb says that al-Qāṭul al-A'lā al-Kisrawī starts from the south of Dūr-Banī al-Ḥārith, east of the Tigris and north of Sāmarra, passing through Ja'farī, Īytākhiyah, Muḥammadiyah, al-Ajamah, Ma'mūniyah, Qanāṭir, Ṣūlā, Ba'qūbā, Bājisrā, Jisr al-Nahrawān, al-Shādhirwān al-A'lā, Jisr Būrān 'Abartā, Barzāṭiyah, al-Shādhurwān al-Asfal and Askaf. Beyond Askaf the waterway flowed for nearly sixty miles between a continuous line of villages and cultivated land, down to Mādhārāya, where its waters finally rejoined the Tigris.<sup>4</sup> Moreover, at some distance below the Muḥammadiya village, according to Subrāb,

---

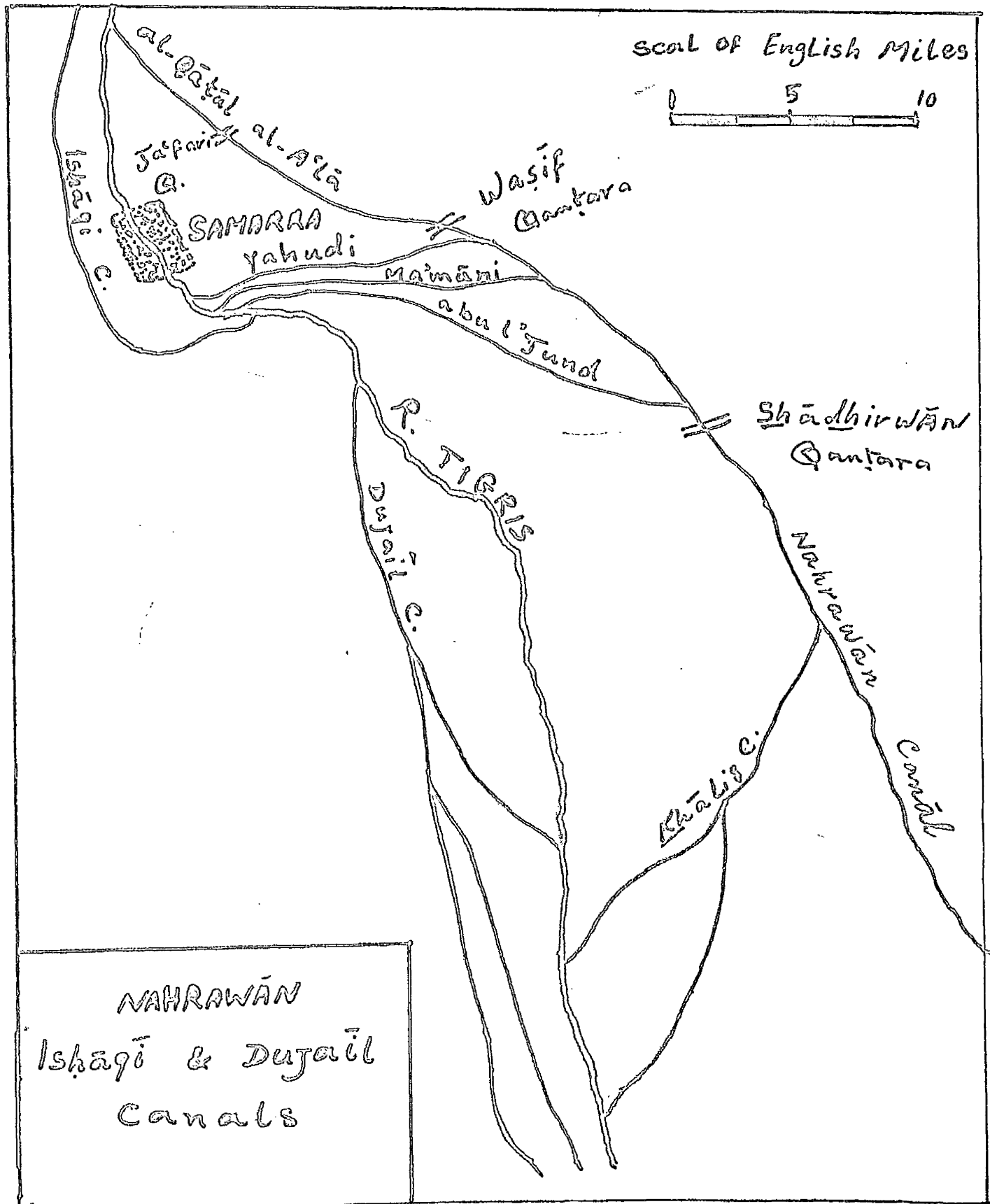
<sup>1</sup> Qudāma, op.cit., p.235; ibn Khurradādhbeh, op.cit., pp. 6-7.

<sup>2</sup> Suhrāb, op.cit., pp. 127-8.

<sup>3</sup> Ibn Khurradādhbeh, op.cit., pp. 6-7.

<sup>4</sup> Ibid., p.128.





the Qāṭūl al-A'la was joined successively by al-Qawāṭil al-thalātha al-Suflā (the three lesser Qāṭūls) known as al-Hahūdī, al-Ma'mūnī and Abu'l-Jund, which were all fed from the left bank of the Tigris near the Matirah village below Sāmarrā'.<sup>1</sup> From its right bank, and near Bājisrā, the Tāmarra canal sent the branch known as the Nahr al-Khālīṣ, which flowed into the Tigris at Barādān to the north of Baghdād; and from this branch many east Baghdād canals derived their water.<sup>2</sup> One mile below Jisr al-Nahrawān the Nahr Diyālā (i.e. Diyala canal) branched south from Nahrawān canal, and after irrigating the area which lies to the east of Baghdād, reached the Tigris three miles south of that city.<sup>3</sup>

- iii) The third irrigation area which ibn Khurradādhbeh names as "Saḳī Digla wa'l Furāt" (land irrigated by the Tigris and the Euphrates), lies between Mādhārāya in the north, the Persian Gulf in the south, the Baḳā'ih in the west and the highlands of Persia in the east. He mentions that this irrigation area comprises two main districts (Aṣṭan) Shādh-Sābūr (or Kaskar) and Shādh-Bahman (or Dijlah) and that these two districts included eight sub-districts (Tassujs).<sup>4</sup> When Suhrāb mentions this, he says

---

<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

<sup>3</sup>Suhrāb, op.cit., p.128.

<sup>4</sup>Qudāma, op.cit., p.235; ibn Khurradādhbeh, op.cit., p.7.

that there were four canals south of Wāsīt, between the Tigris and the Baṣṣā'ih; the waters of the Tigris led off through these canals flowing towards the west in this area. He gives their names as Nahr Ban, Nahr Quraish, Nahr Sayb al-'Uqr and Nahr Bardūdī.<sup>1</sup> Moreover, Suhrāb describes yet another twelve canals under the title of Anhar al-Basra, nine of them being on the western bank of Dijlah al-'aqrā', converging on to Fayḍ al-Basra, the water from which again emptied into Dijla al-'awrā' opposite to 'Abbādān. Their names were Nahr al-Mar'a, Nahr al-Dayr, Nahr Bathq Shīrīn, Nahr Ma'qil, Nahr 'Ubullā, Nahr al-Yahūdī, Nahr Abi'l Khaṣīb, Nahr al-Amīr and Nahr Qandal. The other three canals run from the eastern bank of Dijla al-'awrā' and irrigate the land to the east. The names of these were Nahr al-Mubārak, Nahr al-Rayyān and Nahr Bayān. Each of these twelve canals, according to Suhrāb, was about four farsakhs long.<sup>2</sup> Under the name of al-Nahr al-Jadīd (the new canal) Qudāma mentions what Suhrāb calls Nahr al-Mubārak.<sup>3</sup>

- iv) The fourth irrigation area is that which ibn Khurradādhboh called Saqī al-Furāt wa Dujail min gharbī Dijlah (land irrigated by the Euphrates and the Dujail canal west of the Tigris).

---

<sup>1</sup> Suhrāb, op.cit., pp. 128-9; Le Strange, Lands of the Eastern Caliphates, pp. 40-41.

<sup>2</sup> Suhrāb, op.cit., pp. 135-7.

<sup>3</sup> Qudāma, op.cit., p. 194.

This is the largest and most productive area north of the Baṭā'ih up to a line between al-Anbār and Dur Banī al-Ḥārith. The courses of both the Euphrates and the Tigris determine its eastern and western limits.<sup>1</sup>

Ibn Khurradādhbeh refers to this area as containing six main Astans with a total of twenty-nine Tassujs. Suhrāb details the canalisation system in this area, and according to him the following canals were flowing westwards from the Euphrates to the Tigris: - Nahr Sa'īd, Nahr Duja'il, Nahr 'Isā, Nahr Ṣarṣar, Nahr al-Malik, Nahr Kūthā and Nahr Ṣūrā al-a'lā. Suhrāb also states that the Euphrates splits into two main branches eight farsakhs to the south of Kūthā canal; the eastern part is called Furāt al-Kūfa and the only branch of this which is the Budāt canal, runs from its eastern bank. Furāt al-Kūfa continues its course until it enters the Baṭā'ih at a short distance south of Kūfa.

The second and the larger branch of the Euphrates, known as Sura al-a'lā (upper Surā) flows to the east of Furāt al-Kūfa. After irrigating the three tassujis Surā, Birbisma and Barisma, the Surā al-a'lā canal splits into two branches. The bulk of its water is absorbed by the Ṣarāt al-Kabīra canal, while its remaining water forms yet another canal, the Surā al-asfal. This latter also splits into two parts, the western part retaining the name while the eastern part becomes the

---

<sup>1</sup> Ibid., pp. 235-6; ibn Khurradādhbeh, *op.cit.*, pp. 7-8.

Nars. The lower and last course of Sūrā al-asfal joins the Budāt, flowing eastward to unite with Nars at the Baṭā'ih. The Ṣarāt al-Kabira follows an eastward course passing the villages of Uqr, Ṣābarnīthā and Nawā'ir, after which it splits into two branches. The upper part retains the name of Ṣarāt and the lower becomes the Nīl. These branches join before reaching the villages of Hawl and Sāhus and the canal assumes the name of the latter village until it reaches its end.<sup>1</sup>

#### Levelling, Survey and Maintenance

Various techniques were used by the inhabitants of Iraq during the 3rd century A.H. for land levelling. Certainly some of these methods were adopted from the Byzantines and Persians; they were also, to a certain extent, learned from the Greeks.<sup>2</sup> Some of the techniques must, however, have been the invention of the inhabitants, acquired by the practical experience of land-owners, canalbuilders and others. There is no clear evidence as to what techniques were adopted, by whom used originally, or which were developed independently by the natives of the country.

Among Arabic authors who gave detailed descriptions of levelling methods and techniques for level testing, the most prominent are Abu Bakr Ahmad ibn Waḥshīya (died 257 A.H./870 A.D.)<sup>3</sup> in his

---

<sup>1</sup> Suhrāb, op.cit., pp. 184-5.

<sup>2</sup> EI<sup>1</sup>, "Mīzān," s.v.

<sup>3</sup> Ibn Waḥshīya, Kitāb al-filāḥa al-nabatiya; cf. EI<sup>2</sup>, art. "Filāḥa" and "Ibn Waḥshīya".

Kitāb al-filāḥa an-Nabāṭiya (the book of Nabatean agriculture) and Abū l'wafā al-Būzjānī in Kitāb al-hawī lil a'māl as-Sultāniya wa rusūm al-hisāb ad-dīwāniya. The latter has given useful information in this context under the title "fī dhikr Mawāzin al-Ard li ḥafr al-anḥār al-mustajadda".<sup>1</sup>

Būzjānī draws his information from one who appears to be a specialist in levelling instruments. He is known as Abū Abdullāh Aḥmad ibn al-Ḥusayn al-Shaqqāq, whom he describes as "al-Shaikh al-'Imām".<sup>2</sup> As an introduction to his description of the levelling balances, Būzjānī quotes his "Shaikh" who says that the purpose of such implements is to know the methods of land level testing ("al-maqsūdū min dhālika an yu'raf 'Ulū makān wa inbisāṭ makān").<sup>3</sup> Būzjānī, however, emphasised that his conclusion in this respect contained all the information he himself had been able to collect on the techniques in use in Iraq and Khurāsān. Some had also been learned from previous sources and others from which he had been taught, whether by written or oral means is not disclosed. ("Waqad ataytu bi jamī' ma samī'tuhu wa qara'tuhu 'alā Shuyūkhī".)<sup>4</sup>

---

<sup>1</sup> Būzjānī, Kitāb al-hawī, MSS. (Arabe, no. 2462, Bibl. Paris); Cahen, 'Le Service de l'irrigation en Iraq au debut de XI<sup>e</sup> Siècle, BEO, XIII (1949-51), 117 ff; 'Documents relatif a Quelques Techniques Iraquiennes au debut du onzième siècle', Ars Islamica, XV-XVI (1951), 23 ff; Ehrenkreuts, 'The Kurr System in Medieval Iraq, JESHO, VII (1964), pp. 309 ff.

<sup>2</sup> Būzjānī, op.cit., f. 144a; Cahen, 'Le Service de l'irrigation en Iraq...', BEO, XIII, p.118; 'Documents', Ars Islamica, XV-XVI, p.24.

<sup>3</sup> Būzjānī, op.cit., f. 144a; Cahen, 'Le Service de l'irrigation en Iraq', BEO, XIII, p.119.

<sup>4</sup> Ibid.

In his introduction and publication of this text, Professor Cahen noted that the ancient and modern techniques confronted each other.<sup>1</sup> The work of Būzjānī, although belonging to a later period than the one under discussion in this thesis, yet reflects knowledge which perhaps dates back to an era long before the 3rd century A.H., and emphasises the amount of knowledge which had accrued from ancient times.<sup>2</sup>

There are three types of levelling balances mentioned by Būzjānī which were in general use in Iraq during his era.<sup>3</sup> He gives a detailed explanation of the basic design of each type and the practical method of using it.<sup>4</sup> He stressed, however, that the most commonly used of these balances was what he called Mīzan al-qaṣaba (reed balance) or Mīzan al-'unbūba (pipe balance): "wa ḥaḍḥā al Mīzan ma yusta'malu fī akthari nawāḥi al-'Irāq al-yaūm".<sup>5</sup>

Buzjānī demonstrated how to determine the possibility of drawing water from two points at a distance from one another. One

<sup>1</sup>Ibid., p.117.

<sup>2</sup>Supra, p.40, fn. 3.

<sup>3</sup>These balances were: mīzan al-Khashabah (wooden balance)  
al-mīzan al-Muthallath (triangle balance)  
mīzan al-umbūba (pipe balance)

In his article "al-Mīzan", Wiedemann provides a valuable study of many balances. See EI article, "al-Mīzan", pp. 330 ff. which gives a detailed description of each.

<sup>4</sup>Būzjānī, op.cit., fols. 144a-b; Cahen, "Service", BEO, XIII, 119-121.

<sup>5</sup>Būzjānī, op.cit., fol. 146a; Cahen, "Service", BEO, XIII, p.121.

example mentioned by this author shows the problems, steps and preparatory calculations together with the units of measurement which, to again quote Professor Cahen, appear to offer little mathematical interest.<sup>1</sup> It does, however, present detailed information concerning levelling and, as such, is of special value. Būzjānī referred to ibn al-Muhandis, probably an engineer who surveyed the construction of the Takhshir<sup>2</sup> canal and who, after examining the land from the suggested starting point (al fawha), referred to as point A in the diagram to al-barr (the field), point B, carried out a survey of the land between these two points. He determined the levels of twelve selected points (in this particular example) commencing at point A (the water source) and measured the level at each point relative to the preceding one. He tabulated these measurements, listing in one column all those where the level had risen, giving them the term al-'irtifā'<sup>3</sup> (the height) and in the second column he put all those where the level had dropped, terming them al-'inkhifād (the depth). The table which

---

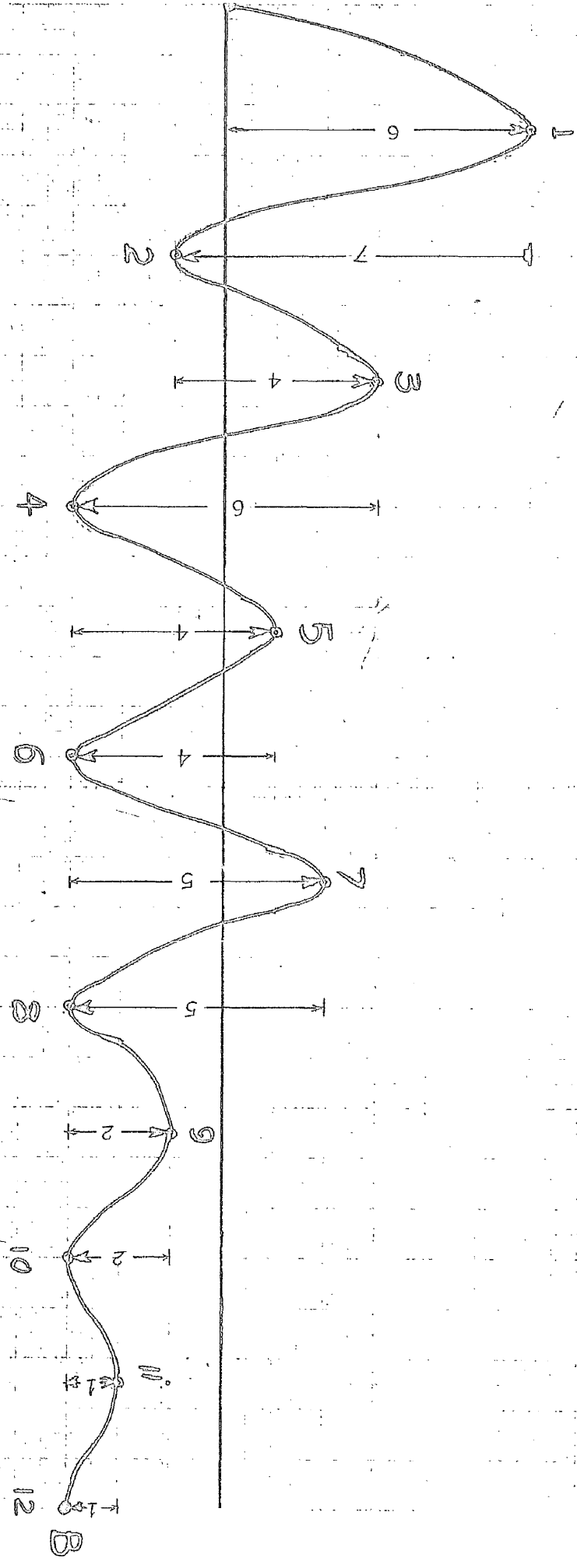
<sup>1</sup>Ibid., XXIII, pp. 117-8.

<sup>2</sup>The location of this canal is not in Iraq; Būzjānī's quotation is taken from al-Samuri (?) and other sources. On hussab Khurāsān al-'adnā' he depended in his information on sources in the eastern part of the Abbasid state such as Jibal province, Hamadān, Nahāwand and al-Kurj; cf. Cahen, "Documents", Ars Islamica, XV-XVI, p.24.

<sup>3</sup>Care should be taken to distinguish clearly between the "irtifā'" here, which means height. The same word is used by other Arab authors when speaking of revenue. Cf. Qudāma, as an example, says "irtifā' al-Sawād irtifā' Faris", etc... meaning the total revenue from each of these areas.



43



follows indicates that along these twelve points there is a depth of three units (qabḍah)<sup>1</sup> between points A and B.

<u>Points</u>	<u>Height (qabḍah)</u>	<u>Points</u>	<u>Depth (qabḍah)</u>
1	6 qabḍas	2	7 qabḍas
3	4 "	4	6 "
5	4 "	6	4 "
7	5 "	8	5 "
9	2 "	10	2 "
11	1 "	12	1 "
Total	22 "		25 "

From this he calculated that water could run from point A to point B in instances where a canal is dug: "fadalla hādha l'i'tibār 'alā 'anna l'inkhi fāḍ akthar min l'irtifā'bi thalāthi qabḍāt, fa'istadalla 'alā 'anna l'mā'yajrī munḥadīran".<sup>2</sup>

Some information relevant to the subject of levelling was also mentioned in ibn Wahshiya's book under the title "fi'l kalām 'an l'miyāh wa-l'anhar (on waters and rivers) and the title "fī islah al diyā'" (on farm reclamation), but are considered of relatively less importance due to the inaccuracy of such information.<sup>3</sup>

<sup>1</sup>Grasp, or 1/12 of "dhirā' al mīzān". Cf. Hinz, Islamische Masse und Gewichte, 54 ff; Lassner, "The Hābil of Baghdad", JESHO, VI (1963), pp. 228-229.

<sup>2</sup>Būzjānī, op. cit., fol. 149a; Cahen, "Le Service de l'irrigation en Iraq", BEQ, VIII, p.123.

<sup>3</sup>Ibn Wahshiyya, Kitāb al-filāḥa al-Nabatiyya, MS., vol. V, fol. 149b; cf. H. Schmeller in "Abhandlungen zur Gesch., der Naturwissenschaft und Medizin", VI (1922), p.36; also EI<sup>1</sup>, "Mīzān", s.v.

As a part of its other functions, the Central Diwān al-Kharāj was responsible for the maintenance of water supplies, dams, weirs, banks, etc. Specialised employees were based on this Diwān and drafted when and where necessary. Land surveyors and civil engineers were always needed to assist those who were concerned with such construction and the maintenance of necessary irrigation; and to advise the digging of further canals. Specialists were also needed to supervise dredging and draining of existing waterways. The banks of canals and rivers had to be kept in repair and the responsibility for this rested with the central dīwān al-Kharāj in the capital, supplemented by its branches in the provinces.

In addition to those concerned with planning, supervising the construction of canals, etc., & maintenance of irrigation, a vast number of labourers were necessary. Jāhiz<sup>1</sup> mentions special engineers concerned with the problems of water supply (muhandisū 'l-mā'). When he established his capital at Samarra, the caliph Mu'tasim brought in engineers for this purpose from China. Būzjānī mentions supervisors of water levels, capacity and flow of the rivers, canals and sub-canals (qaiyāsūn); those employed in creating new canals; dredging work (haffārūn); those who carried displaced soil to strengthen outposts, dams and weirs; disposers of unnecessary rubble (naqqālūn); reed binders for the purpose of dam building (razzāmūn) were all mentioned. Lastly, he speaks of the Controller who organised all types of work according to its nature.

---

<sup>1</sup>Jāhiz, al-tabassur bi'l-tijara, pp. 33-4.

Cahen also mentions that there were many problems relative to the digging and maintenance of canals, dams, embankments, etc. Many of these, he says, were simple everyday matters and presented few difficulties.<sup>1</sup>

### Methods of Irrigation

As already stated, the adīwān al-Kharāj supervised the distribution of water and was primarily responsible for the construction and maintenance of canals, weirs, sluices and dams. For this purpose it employed a large number of experts in the various fields. Cultivated lands were irrigated either directly (yusqā saihan) or by machines (yusqā bil saniah aw ad-daliya).<sup>2</sup> According to al-Khaṭīb al-Baghdādī natural irrigation (yusqā saihan) prevailed in many parts of Iraq, but he did not define these areas.<sup>3</sup>

Būzjānī records the names of the water-machines, which were widely used in irrigation, as under:<sup>4</sup>

- a) an-Nawa'ir al-mushirāt ad-dā'irah;
- b) ad-Dawālīb;
- c) ad-Dawalī;
- d) ash-Shawādīf;

---

<sup>1</sup>Cahen, "Le Service de l'irrigation en Iraq", BEO, VIII, p.117.

<sup>2</sup>Abū Yūsuf, Kitāb al-Kharāj, p.29.

<sup>3</sup>al-Khaṭīb al-Baghdādī, op.cit., vol. I, p.59.

<sup>4</sup>Būzjānī, op.cit., fol. 164 a; Cahen, "Le Service de l'irrigation en Iraq", BEO, XIII, pp. 118-119; Dūrī, Tā'rikh al-'Irāq al-Iqtisādī, pp. 551-2.

e) al-Bakrāt.

a) The Nā'ūr is a water-wheel turned by the thrust of the flow of the river; the following can be derived from Būzjānī's books:<sup>1</sup>

i) The standard nā'ūr carries eight tankards.

ii) The tankard capacity is fifteen raṭls of water, and thus the outflow of the nā'ūr is about 1,200<sup>2</sup> raṭls of water to each complete circle.

iii) It can be operated day and night continuously at an average speed of 250 revolutions per hour.

iv) About 300,000 raṭls of water are needed for the irrigation of one Jarīb<sup>2</sup> which thus needs an hourly output by the nā'ūr

In winter the output of a nā'ūr is sufficient for the irrigation of 350,000; in summer, owing to the heat and the consequent low level of the water, it can only provide enough water for 80 jarībs of cultivation.

This type of water-wheel was in general use in the Nahrawān area,<sup>3</sup> in the western part of Bādūrāyā to the west of Baghdād and in the northern part of the 'Anbār area on the Euphrates.<sup>4</sup>

b) The dūlāb was also another type of water-wheel. It resembled the nā'ūr but was more complicated; it was slower and was operated

<sup>1</sup>Ibid.

<sup>2</sup>The raṭl is a weight unit. Cf. Hinz, op.cit., p.31.  
The jarīb is a measure unit, equal to 1,592 m.sq., ibid., pp. 65-66.

<sup>3</sup>Ibn Rusteh, op.cit., p.163.

<sup>4</sup>Ibn al-Jawzi, Talbīs iblīs, p.204.

by an animal - a horse or an ox - and not by water-thrust. Būzjānī has distinguished between two types of dūlāb, according to its water capacity.<sup>1</sup>

i) A dūlāb operated by one horse or ox could irrigate 70 jarībs a day. The water supplied by such a dūlāb is sufficient to irrigate 70 jarībs of winter cultivation and 30 jarībs during the summer.

It is important to remember that the difference between winter and summer irrigation results were due to factors other than the amount of power used to drive the dūlāb. They depended rather upon climatic conditions which sped or slowed down human or animal ability. Also, during winter, rains assisted in the work of irrigation whereas in summer it was entirely dependent on artificial means. Again, water-levels, as in the case of nā'ūr, were higher in the cold weather although vegetation was less prolific. During the summer season, the dūlābs were operated by day and night, but only during the day in winter.<sup>2</sup>

These dūlābs were found in western Baghdād and were often used to irrigate gardens,<sup>3</sup> and in the Anbār area, according to Qaḍī

---

<sup>1</sup> Būzjānī, op.cit., fol. 164a; Cahen, "La Service de l'irrigation en Iraq," BEO, XIII, pp. 118-119.

<sup>2</sup> "لأن البقر تدور في الشتاء نهاراً وفي الصيف تدور ليلاً ونهاراً" Būzjānī, op.cit., fol. 165b; Cahen, "La Service...", BEO, XIII, pp. 116-117.

<sup>3</sup> al-Khaṭīb, op.cit., vol. I, pp. 106-7; ibn al-Jawzī, Manāqib Baghdād, p. 27; Tha'ālībī, Yatīmat al-dahr, Vol. II, p. 12.

Tanūkhī, dūlābs were operated by camels.<sup>1</sup>

c) The dālīya (p. dawālī) is a water-wheel, the name for which varies according to the diameter of the pulley-block and the size of the bucket, and was operated by man-power. The buckets were made of straw mat covered both inside and out with tanned skins; Būzjānī however, speaks of four kinds of dālīya:<sup>2</sup>

- i) al-dālīya al-kūfiyya: the diameter of the pulley-block of this kind of dālīya varied between 20-30 dhira's.<sup>3</sup> Eight men were needed to operate it, six of them to move the dālīya, one to fill the buckets and one to empty them.
- ii) al-dālīya al-Fārisiyya (the Persian dālīya). As its name suggests, this type of dālīya may have been either developed in Persia in the earlier times and adopted in Iraq, or it may have been developed in Iraq in pre-Islamic times and remained in use during the Abbasid era; the diameter of the pulley-block of this dālīya is 24 dhira's. It needed seven men to operate it, five of whom turned it, one filled and one emptied the bucket.
- iii) al-dālīya al-muḥdatha (the modern dālīya). In this the pulley-block varied between seven to nine dhira's, and required three men to operate it.

---

<sup>1</sup>Tanūkhī, Nishwār al-muḥaḍara, vol. VIII, p.139.

<sup>2</sup>Būzjānī, op.cit., fol. 164b; Cahen, "La Service...", BEO, VIII, pp. 118-9.

<sup>3</sup>The dhira' is a measure unit equal to 12 qabḍas and to 54.04 cms. Cf. Hinz, op.cit., p.55.

iv) al-Zarnūq (p. Zarānīq). This is a small water-wheel operated by one man and was usually built in case the water supply was insufficient for the larger types of dālīyas.

Water supplied by any of the first two mentioned dālīyas could irrigate between 6 and 8 Jarībs per day. The area, in fact, varied with the water level of the source from which it was derived. According to Būzjānī the area of irrigation fluctuated during the winter between 130 and 80 jarībs, dependent on the water level and the amount of rainfall. In the summer season these figures were around 60 to 53 jarībs respectively (see table below).

The capacity of the third type (i.e. al-dālīya al-muḥdatha) was varied by the water level in addition to the size of its pulley-block. Not more than 30 jarībs in the winter season and 20 jarībs in the summer season could be irrigated by such a dālīya. The capacity of the Zarnūq was less than that of al-dālīya al-muḥdatha (see table).

Shādūf (p. Shawādīf), as described by Būzjānī, was a bucket made in a similar way to that of the dālīya.<sup>1</sup> Shādūf required four men to operate it and could irrigate 4 jarībs daily. 70 jarībs in the winter season and 30 in the summer season could be irrigated by this means. They were used, according to Suhrāb, in the Ṣarṣar

---

<sup>1</sup>Būzjānī defines the shādūf as "د لولطيف يعمل من بوارى مثل د لوالد الية" See Cahen, "La Service....", pp. 118-19.



canal area.<sup>1</sup>

Bakra (p. Bakrāt), a simple draw-well drawn by a cow or an ox, had a capacity of about 200 raṭls of water. Two Bakrās could be simultaneously operated on the same well.<sup>2</sup> Muqaddasī mentioned that the Harrān area was wholly dependent on irrigation from wells, which infers that this particular kind of device was used there.<sup>3</sup>

Climatic conditions in Iraq, as previously mentioned, were generally predictable. Thus, it was possible for Būzjānī to estimate the extent of irrigation supplied by his intimate knowledge of each device in use, during both the summer and winter seasons. The following table shows the calculations he arrived at for each kind of water-raising equipment.<sup>4</sup>

- a) refers to the size and type of the water-raising device;
- b) refers to the anticipated extent of daily irrigation expressed in jarībs;
- c) refers to the anticipated extent of irrigation during winter months expressed in jarībs;
- d) refers to the anticipated extent of irrigation during summer months expressed in jarībs;
- e) refers to the amount of water supplied daily (expressed in raṭls).

<sup>1</sup> Suhrab, op.cit., p.127.

<sup>2</sup> Būzjānī, op.cit., fol. 165a; Cahen, "La Service...", BEO, VIII, p.119 ff.

<sup>3</sup> Muqaddasī, op.cit., p.141.

<sup>4</sup> Būzjānī, op.cit., fol. 165b; Cahen, 'La Service...', BEO, VIII, pp. 118-119.

(a)	(b)	(c)		
Nā'ūr	24	350-400	80	7,200,000
dūlāb (one ox)	10	70	30	3,000,000
" (two oxen)	22	150	70	6,600,000
Dālīya, (Kūfīyya or Farisiyya assisted by natural irrigation)	6-8	130	60	2,400,000
Dālīya (Kūfīyya or Farisiyya alone)	-	80	53	1,800,000
Dālīya (muḥdatha)	-	30	20	-
Shadūf	4	70	30	1,200,000
Bakra	-		-	60,000

### Water Regulation

Before reviewing the available information on methods of water regulation through rivers and canals in Iraq during the Abbasid period, it is important to have a knowledge of the terms in use at that time.

It is an established fact that in Arabic philology the meaning of some terms has developed while in others it has changed with time. For instance, the term Qantara which now refers to what is known as a dam could mean either a barrier in front of which the water level rose until it overflowed, or one with various built-in

tunnels with gates to regulate the water flow. In the latter case it was also given the name of Shādhirwān. Today in Iraq Qanṭara means a small bridge over a small sub-canal where pedestrians and cattle may cross. The term Nahr, which means river, was given by Arab authors to every water-course whether it was the Euphrates or the Tigris, canal or stream. In modern times it denotes the two main rivers of Iraq (Euphrates and Tigris).

Suhrāb's description of Furāt al-Kūfa canal gives an extremely clear indication of what was meant by Qanṭara and Jisr at that time. He states: "It passes over the Qanṭara of Kūfa and on it there is a Jisr (bridge)". About the sūrā al-a'lā canal, he states that "After passing the Jisr of Sūra, it reaches the Qanṭara of the Qanighān", which he described as a "Very great dam, over which the water flow is very great". With the exception of some general information concerning the location and size of some of them and the names of these qanṭaras or weirs, there is no information concerning their date or method of construction, capacity or ways of their operation given by the Arabic sources.<sup>1</sup>

According to al-Khaṭīb al-Baghdādī and Suhrāb, the qanṭaras depicted in the following table were found in Iraq until the end of the 3rd century A.H.<sup>2</sup>

---

<sup>1</sup>Suhrāb, op.cit., p.135.

<sup>2</sup>Ibid., pp. 121-136; al-Khaṭīb al-Baghdādī, op.cit., I, pp. 111-144.

<u>Canal</u>	<u>Qanṭara</u>
i) 'Isā	1. Dumammā 2. al-Yāsiriya 3. al-Rūmiya 4. az-Zaiātin 5. al-Ashnān 6. ar-Rumman 7. al-Maghīd 8. al-Bustan 9. al-Ma'bidī 10. Banī Zuraiq
ii) Ṣarāt	11. al-'Abbās 12. as-Ṣīniyāt 13. Raḥa'l baṭriq 14. az-Zabad 15. al-Qanṭara al-'Atīqa 16. al-Qanṭara al-Jadīda
iii) Karkhāiyyā	17. Qaṭi'at al-Yahūd 18. Darb al-Hijarah 19. al-Bimaristan
iv) Mūsā	20. Maqṣam al-Mā' 21. al-Anṣar
v) Nahrawān	22. al-Ja'fariya 23. al-Qanṭara al-Kisrawiya 24. ash-Shādhirwān 25. ash-Shādhirwān al-a'lā 26. ash-Shādhirwān al-asfal
vi) Furāt al-Kūfa	27. al-Kūfa
vii) Ṣūrā al-a'lā	28. al-Qanīghān
viii) al-Ṣarāt al-Kabīra	29. al-Māsi
ix) al-Qawaṭīl ath- thalāthah	30. Qanṭarat Waṣīf

Finally it should also be made clear that most of these qanṭaras were either not working or not in existence during al-Khaṭīb al-Baghdādī's life.

He stated, for example, "haddathānā man adrakahū jārian" (i.e.

someone who has seen the water running in this river told me), and "sami' tu man yadhkuru annahū tawaḍa' minha" (I heard from those who washed from its water), or "ra'ituhū lā mā' fihī" (I have seen that river dry) and "waqad ta'aṭṭalat hadhihī al-anhār wa darasa aktharaha hattā la yūjaadū lahū athar" (all these rivers are not running and most of them have completely disappeared).<sup>1</sup> This means that roughly around the beginning of the fourth century A.H. all these qanṭarās and rivers were probably in existence.

The most recent and accurate research on one of these qanṭarās (Qanṭarat ash-Shadhirwān al-Aṣfal) was undertaken by the Directorate General of Antiquities of Iraq and carried out by a group of Iraqi and American experts.<sup>2</sup> Due to the relevance of this to the present study a summary of their description of such constructions, made during the Abbasid period, is given as a model.

This weir served to raise the waters in front of it to a level of approximately 3 metres above that of the pool behind it and facilitated the water supply to eleven branch canals. It consisted of the following parts:

- i) A spillway, built on a stepped brick platform,
- ii) Two flanking abutments,
- iii) Two frontal guide banks,

---

<sup>1</sup> Al-Khaṭīb al-Baḡhdādī, op.cit., I, pp. 135-8.

<sup>2</sup> Government of Iraq Directorate General of Antiquities, Canalinity and Irrigation Agriculture in Antiquity. Report on Essential Results (1957-1958).

- iv) A quay or closing wall to the pool behind, and
- v) Two regulators, one in the right bank of the Nahrawan and one in the left, at a short distance above the weir.

The spillway of the weir is a solid dam, 37.56 metres wide and 30.000 metres deep. It is graded in steps at its central pier and is covered on top with a concrete layer, 20 cms. thick, of a well-cemented mixture of lime, pebbles, limestone cherts and small pieces of brick.

The two abutments on both sides of the spillway must originally have been of a height sufficient to contain the water even at high flood. The right abutment, which served also as a closing wall to the pool, is built rather more solidly than the left. It is buttressed with a tower at both ends and stands on a pedestal platform as high as the spillway itself.

Each abutment extends in front of the weir into a guide bank. The first section of the guide bank on the right functions both as guide bank and closing wall to the pool; its second section serves as a closing wall only. The guide bank on the left runs approximately at right angles to the direction of the abutment and ends in a tower embedded in the left earth bank.

The closing walls to the pool served the purpose of protection against erosion by wave action and guarded the weir against being out-flanked by the pool behind it.

Above the weir, at a distance of about 140.00 metres, there was on each bank a regulator to relieve the spillway and its abutments in times of flood and to serve the general purpose of water

regulation. These regulators are built of brick and appear to date to the 9th century A.D. The arch of the regulator on the right bank is rounded and older, and was probably constructed no later than the eighth century A.D. Both regulators show vertical lines of holes in their masonry walls which were doubtless intended for the insertion of wooden beams to hold the planks in place when the sluice needed to be completely or partially closed.<sup>1</sup>

### Draining and Reclamation

There are no direct references in the sources to either confirm or deny the existence of a drainage system in Iraq during the Abbasid period. Neither has any recent archaeological survey revealed any proof.<sup>2</sup>

There are evidences, however, that considerable territories, in the period preceding the Abbasids, were drained and reclaimed in the Baṭā'ih area. Qudāma ibn Ja'far states that "in the reign of Mu'awia ibn abī Sufiān, 'Abdullāh ibn Darrāj, a freedman of the caliph... gained from the Baṭā'ih land which produced an annual income of five million dirhams. Later, Hassān, the Nabatean, a freedman of Banī Dhabba... laid dry much territory at the command of al-Walīd and again later, at the command of Hishām. The work of drainage has been maintained to this day."<sup>3</sup> Balādhūri states that Maslama b. 'Abdal Malik laid dry the most important region of the

---

<sup>1</sup>Ibid., pp. 88-99.

<sup>2</sup>Ibid., p. 64.

<sup>3</sup>Qudāma, op.cit., pp. 181-2.

Baṭīḥa by digging channels named as-Sayibāin.<sup>1</sup> Moreover, Balādhurī states that many territories were drained and reclaimed in the area lying to the north of Baṣra and he gives a detailed list of the locations of those areas<sup>2</sup> which then became the property of those who had reclaimed them.

When Qudāma records the cultivation of the Baṭīḥa area, which was known to be a swamp, there must have been reclamation operations which would involve washing and draining these lands and leaching precipitated salts prior to cultivation. The phrase "digging two channels" in the Baṭa'ih (as-Sayibāin) as mentioned by Balādhurī, suggests that these were intended to be routes for water draining. The fact that there was no direct reference to the methods of draining does not necessarily determine their non-existence.

It would seem that long experience had led the farmers to adopt methods of land-reclamation, some of which are still accepted in Iraq. For example, the land was left uncultivated for a specific period and on it deep-rooted weeds like Shūk and 'Aqūl grown naturally. These types of weed assist the soil to get rid of excess water and salt. Russel has suggested that these deep-rooted weeds (Shūk and 'Aqūl) tend to dry the ground to an appreciable depth and to create a protective dry zone between the water table and the root zone.<sup>3</sup> This would minimise the amount of salt which rose from the water table through capillary action.

---

<sup>1</sup>Balādhurī, op.cit., p.413.

<sup>2</sup>Ibid., pp. 407-8.

<sup>3</sup>Russel, J.C., Saline Land Management Practices in Iraq, pp. 4-5.



Another method for land reclamation was also in use in Iraq during the Abbasid time, viz. the cultivation of Riṭāb<sup>1</sup> and Barley. Ibn Waḥshīya says that cultivating the land with barley year after year helps to clear salts from the soil "idhā zuri'a al-sha'īru fihā sanatan ba'da sanatin laqaṭa muluḥatla wa akhrajahā 'anhā".<sup>2</sup> This was explained in greater detail by Russel who gave the reasons why barley cultivation improves the soil:<sup>3</sup>

1. In the absence of these (i.e. the plants which grow immediately after the barley harvest without any irrigation) to function at drying out the parched water table, water that is close to the surface would rise to the surface and bring salt with it.
2. These plants are legumes; they put nitrogen into the soil, thus producing valuable substance to maintain organic supply and prevent soil blowing.
3. When the second fall comes around and the villagers have ploughed, seeded, covered and then irrigated, there is a dry sub-soil, and the irrigation leaches any salts out of the surface as deep down as the water reaches. There these salts become trapped and harmless.

It should be pointed out, however, as Russel explained, that the method of land reclamation by growing barley and riṭāb cannot be repeated indefinitely. At some stage the salt concentration will prevent any type of plant cultivation and then the land has to

---

<sup>1</sup>Abū Yūsuf, op.cit., pp. 28-9.

<sup>2</sup>Ibn Waḥshīya, op.cit., fol. 336; Cf. Dūrī, Iqtisādī, pp. 33-52; Canard, M., "Le Riz dans le Proche Orient aux Premiers siècles de l'Islam", Arabica, VI (1959), 11/3 ff.

<sup>3</sup>Russel, op.cit., p.4.

be completely abandoned. This may throw light on what Abū Yūsuf mentioned about the difficulty of reclaiming lands which were abandoned for long periods: "... fa'mmā mā ta'aṭṭala mundh mi'atī sanatīn wa aqallā wa akthara falāisa yunkinū 'imaratahū walā istikhrajahū fī qarīb".<sup>1</sup>

Obviously this was not the only reason for abandoning the cultivation of some lands in Iraq. Various economic, social or even political factors may have been involved. Other methods of reclamation were used, such as were in the case of land covered by shallow water, especially in the Baṭīḥa area, and Arab geographers provide some accounts of those areas where rice was grown.<sup>2</sup> This would doubtless apply specially to the shallow parts of the Baṭīḥa and to land which had been reclaimed from the marshes (al-Jāmida) where the climate was warm and humid. Qudāma and ibn Khurradādhbeh, however, included a number of sub-districts among the statistics dealing with Sawād, where rice, in large quantities, was the chief commodity. These sub-districts were considered as part of the Baṭā'ih.<sup>3</sup> Qāḍi al-Tanūkhī refers to three other districts to the south-east of Kūfa (i.e. at the edge of the Baṭā'ih) where rice was extensively produced.<sup>4</sup> Another passage by the same author

---

<sup>1</sup> Abū Yūsuf, op.cit., pp. 27-8.

<sup>2</sup> Yāqūt, op.cit., vol. II, p.208, vol. IV, p.100.

<sup>3</sup> Ibn Khurradādhbeh, op.cit., pp. 8-14.

<sup>4</sup> Tanūkhī, op.cit., vol. VIII, p.67.

refers to the rice plantations of Jāmīda, the locality of Baṭīḥa to the south of Wāsiṭ and to the east of the river Tigris. The region of Jāmīda was considered by Canard to be the richest part of lower Iraq.<sup>1</sup> This area, which consisted of lands which were partly dried and partly under shallow water, was included in the Baṭīḥa. Simple earthworks of mud and reeds were built around low-lying agricultural land in order to prevent it from being covered by water and from flooding during heavy rains.<sup>2</sup>

#### Divisions of al-‘Iraq

When they described Iraq in the 3rd century, both Qudāma and ibn Khurradādhbeh enumerated twelve districts (called Astān), each containing a different number of sub-districts. These were called Tassūj and their total number was sixty. This was probably for fiscal purposes in order to supervise the agricultural production and ensure an adequate income for the Abbasid government by means of organising administration. This division, with perhaps a few changes - as would appear from a study of the names - was doubtless in existence prior to the Arab conquest of Iraq.

Both Qudāma and ibn Khurradādhbeh provide the following statistics concerning the divisions of the Sawād which are repeated by other Arabic geographers: <sup>3</sup>

---

<sup>1</sup>Canard, op.cit., p.117.

<sup>2</sup>Miskawāh, Tajārib al-‘Uman, vol. II, p.297; also Dūrī, Iqtisād, p.52.

<sup>3</sup>Qudāma, op.cit., pp. 234-6; ibn Khurradādhbeh, op.cit., pp. 5-8.

<u>Astān (Kura)</u>	<u>Tussuj</u>
1. <u>Shādh-Fayrūz</u>	Fayrūz-Qabādh, al-Jabal, Tamarra, Arbīl, <u>Khanaqīn</u> .
2. <u>Shādh Hurmuz</u>	Buzurjisābūr, Nahr Būq, Kalwadhā and Nahr Bin; Jāzir, al-Madīnah al- 'atīqah, Rādhān al-a'lā, Rādhān al-asfal.
3. <u>Shādh-Qubādh</u>	Rustuqbādh, Mahrūdh, Silsil, Jalaūlā and Julultā, al-Dhaībāin, al-Bandanijāin, Barāz al-Rūz, al-Daskarah and al- Rustāqāin.
4. Bazījān-Khusraw (or al-Nahrawān)	al-Nahrwaān al-a'lā, al-Nahrawān al-Aṣat, al-Nahrawān al-Asfal, Iskāf and Jarjarayā, Baderayā, Bakasāyā.
5. <u>Shādh-Sabūr</u> (or Kaskar)	al-Zandaward, al-Tharthūr, al-Astān, al-Jawāzir.
6. <u>Shādh-Bahman</u>	Bahman-Ardashīr, Maysān (or Malwy), Dasti-Maysām (al-'Ubullah) Abz-Qubādh.
7. Al-'Alī	Fayrūz-Sabūr (al-Anbār), Maskin, Katrabbul, Badurayā.
8. <u>Ardashīr-Bābkān</u>	Bahurasir, al-Rūmaqān, Kūtha, Nahr Durqīt, Nahr Jawbar.
9. Bih-Dhiumasūfan (or al-Zawābī)	al-Zāb al-a'lā, al-Zāb al-aṣat, al-Zāb al-asfal.
10. Bih-Qubādh al-A'lā	Bābil, <u>Khutarnīyah</u> , al-Fallūjah al- 'Ulya, al-Fallūjah al-Suflā, al- Nahraīn, 'Ayn al-Tamr.

11. Bih-Qubādh al-Aṣaṭ Jubba and al-Budāt, Sura and Barbisma, Barūsama, Nahr al-Malik. 'It has been suggested that the latter two are one Tassūj. The fourth includes al-Sayībāyn which has been transferred to al-Ḍiyā'.)
12. Bih-Qubādh al-Asfal Furat-Badaqlā, al-Sailāḥāin, Tistar, Rūḍhamastān, Hurmuz-Jard. (It has been said that Rūḍhamastān and Hurmuz-Jard are separate Ḍiyā' belonging to several Tassūjs.)

Ibn Khurradādhbeh seems to coincide generally with Qudāma's statistics concerning the divisions of the Sawād except in a few cases which probably occurred as a result of some administrative and geographical changes. He states that Astān Shādh-Fayrūz (or Hulwān) was attached to the Jibāl province; and that Astān Shādh-Bahman (Dijlah) was annexed to Baṣra; while an un-named Tassūj was considered as part of the Bata'ih and the un-named Tassūjs of Astān Bih-Qubādh al-Asfal were considered as Ḍiyā' Khaṣṣah. The above-mentioned account makes the total number of the Astāns ten and the total number of Tassūjs forty-eight.<sup>1</sup>

Upon consulting Qudāma's list of divisions one finds that the Tassūj of Rustaqbādh was transferred from the Astān of Shādh-Qubādh,

---

<sup>1</sup>Ibn Khurradādhbeh, op.cit., pp. 5-8.

which . comprised seven Tassūjs, to the Astān of Shādh-Hurmuz. The Astān of Bazijān-Khusraw (otherwise Nahrawān) appears in his records as Astān Aṣandīn-Kird. The Astān of Shādh-Sabūr is called by Qudāma Khusraw-Sābūr and it includes the Tassūj of Tharthūr, which he calls al-Bazbūn.

In conclusion the province of Iraq was divided, during the 3rd/9th century, into ten districts, each one containing sub-districts which numbered 48 in all. Moreover, according to ibn Khurradādhbeh, some changes took place in these divisions in about the second half of this century. The names indicate the divisions of the country taken over by the Arabs from the Sassanians. Both Qudāma and ibn Khurradādhbeh, mentioned that the meaning of Astān is Iḥāza. and of Tassūj is Nahiya.<sup>1</sup> It could therefore be said that the Arab geographers clearly indicate the origin of these terms and clarify their division. Unfortunately, however, the boundaries of the districts and sub-districts cannot be accurately determined as all Arab geographers gave only the general location of the Astāns (districts) and merely enumerate the sub-districts (tassūjs).

---

<sup>1</sup> Qudāma, op.cit., pp. 236-8.

## Chapter II

### ASPECT OF TENURE ON PRODUCTION

Sharīk, the Jurist, gives a very interesting picture of the inhabitants of the Sawād. He wrote "ahl al-Sawād 'abīd ariqqā'",<sup>1</sup> the translation of which is: "The inhabitants of the Sawād are servants and serfs." This reflects not only his own view as a jurist who lived during the era preceding this study, but reflects the structure of society as it became during the period following the Arabic occupation.

It is important to clarify the nature of the relation between the urban society of Iraq and the Government, and to note to what extent all classes of the community, during the 3rd century A.H., depended upon the activities of the cultivators.

In his statement, Sharīk was not suggesting that the inhabitants of the Sawād were merely servants or slaves in the usual acceptance of the sense of the words. Certainly no-one can claim that they were considered, theoretically, to be in a class lower than were the Arabs during the Abbasid period.<sup>2</sup> The principle of equality was proclaimed by the Abbasids, and Sharīk, here, merely

<sup>1</sup> Ṭabarī, Ikhtilāf al-fuqahā', p.222.

<sup>2</sup> Dūrī, Dirāsāt fi'l 'uṣūr al-'Abbāsiyya al-muta'akhira, p.10; Muqaddima fi al-ta'rikh al-iqtisādī al-'arabī, pp. 57-8, al-'asr al-'Abbāsī al-awwal, pp. 14 ff. Cf. Lewis, 'Abbasids', EI<sup>2</sup>, s.v.; Gibb, Studies on the civilization of Islām, pp. 43-4; Omar, The Abbāsīd Caliphate 132/750-170/786, pp. 57 ff.

refers to the general policy towards agricultural people and reflects their importance to the service of the country.

During the Abbasid, and even in earlier periods, the Government depended on the revenue from its agriculture (the fay') to cover its expenditure (al-u'tiyat wal-arzaq) on military and other pensions, and to strengthen and defend its borders.<sup>1</sup>

Any deficiency in cultivation activities by peasant or cultivator, or indeed any change in the kinds of produce, would thwart government interests as far as revenue was concerned or else lead to price inflation which would ultimately affect the Government.<sup>2</sup>

Society also depended on agricultural produce and cultivators were compelled to work as hard as possible: in order to provide sufficient food for the needs of society. Towns were almost totally dependent for their food on the surrounding country-people.<sup>3</sup> Sources are unanimous in pointing out that one of the reasons why Abū Ja'far al-Manṣūr chose the area of Baghdād as his capital was for the extensive cultivation areas in which it was situated.<sup>4</sup> A close scrutiny of the cities of Iraq

<sup>1</sup> Qudāma, Kharāj (MS.KK.), fol. 89a; Sābi, Wuzarā', pp. 13-28, 336-8; Miskawāh, op.cit., vol. I, p.27. cf. Durī, Iqtisādī, p.38; Lewis, 'Abbasids', EI<sup>2</sup>, s.v.

<sup>2</sup> Miskawāh, op.cit., vol. I, pp. 27-8.

<sup>3</sup> Tabarī, Ta'rikh, III, 1640; Iṣṭakhrī, op.cit., p.85; Ibn Hawqal, op.cit., p.167; Ibn al-Athīr, op.cit., vol. VII, pp. 54-55; Dimashqī, Ishāra, pp. 60-61.

<sup>4</sup> Tabarī, Ta'rikh, III, p.275; Ya'qūbī, Buldān, pp. 242-54; Ibn al-Athīr, op.cit., vol. V, p.265; Muqaddasī, op.cit., pp.119-20.



during the 3rd century, as mentioned by Ibn Syrabīq, shows that they were in the midst of cultivated areas which provided them with food.<sup>1</sup> The only helpful alternative during periods of crises was commerce. This perhaps supplies the reason why many towns were built close to rivers and canals which were the important links of transportation with trade.<sup>3</sup>

To grant the peasant real estate or property in the land of the Sawād would undoubtedly give freedom of choice of cultivation and, as such, could be disastrous to the state.<sup>4</sup> Unless a check could be kept on the kind of crops produced, there could be a real threat to the life of the towns and to the government treasury.

Sharīk, among other jurists, defends the autocracy of the authorities and their right to direct and, if necessary, enforce the cultivation of prescribed crops.<sup>5</sup> This, he felt, was the only way to ensure the stability of the economic life of the town

<sup>1</sup> Suhrāb, op.cit., pp. 121 ff.

<sup>2</sup> Jāhīz, al-Tabassur bi'l tijāra, pp. 33-4, 38-9; Ya'qūbī, Buldān, p.264; Ṭabarī, Ta'rikh, III, p.275; Ibn al-Athīr, op.cit., Vol. V, p.265.

<sup>3</sup> Supra, fn. 1; also Ibn al-Athīr, op.cit., vol. VIII, pp. 115, 136; Ibn Rustah, op.cit., pp. 122-123; also Ya'qūbī, Buldān, p.234.

<sup>4</sup> Such a problem, in fact, faced the cultivation in the Sawād earlier during the Hajjāj term of government. It was accompanied by mass emigration from the villages to the towns. This explains why restrictions were later imposed on peasant migration by the Abbasids. See Ṭabarī, Ta'rikh, III, p.1750.

<sup>5</sup> Ṭabarī, Ikhtilāf, p.222. Cf. S.M.Yūsuf, 'Land, Agriculture and Rent in Islam', IC, XXX (January, 1957), pp. 27-39; M. Hamidullah, 'Islam's Solution of the basic Economic Problems', IC, X (April, 1936), pp. 213-233.

dwellers and to strengthen the government.<sup>1</sup> By this means wastage of cultivatable land was avoided, which might have been the case without adequate control, and ensured that the right use was made of all land and the right yields were cultivated.<sup>2</sup>

This policy, however, was bound to lead to some controversy concerned with the tenure of the land in the Sawād, where various questions were related to distinction between the right of lordship and that of possession.<sup>3</sup> Not only this question but controversy arising as to which part of the Sawād was to be considered *ṣulḥ* or 'anwa land.<sup>4</sup> On the other hand, the connection between the legal status of land and the percentage of the tax collected on the production was probably one of the major factors to be considered.<sup>5</sup>

### Production activities

In spite of the supervision of *diwān al-kharāj*, the output of production, from "milk" land seems to have been better than that of *kharāj* land.<sup>6</sup> Part of the responsibility for that was,

<sup>1</sup>Abū Yūsuf, *Kharāj*, p.32; Qudāma, *Kharāj*, (MS.KK.), fol. 89a; cf. Poliak, 'Classification of Lands in the Islamic Law and its technical terms', *AJSL*, vol. LVII (January-October 1940), pp.50-62.

<sup>2</sup>Ṣabī, *op.cit.*, pp. 256-7, 336-8; Miskawāh, *op.cit.*, Vol.I, p.27.

<sup>3</sup>Abū Yūsuf, *op.cit.*, p.32. Cf. Poliak, 'Classification', *AJSL*, vol. LVII (1940), pp. 53-4.

<sup>4</sup>Yahyā, *Kharāj*, pp. 6, 36, 118; Abū Yūsuf, *op.cit.*, pp. 33, 36, 39; Qudāma, *Kharāj*, (MS.KK.), fols. 81b, 84b, 85a, 89a; Ṣulī, *Adab*, vol. III, pp. 212-3; Ibn Rajab al-Ḥanbalī, *Kitāb al-istikhrāj* (MS.RL.), fols. 31b, 33a, 40a-b, 43a, 111a-b.

<sup>5</sup>Abū Yūsuf comments: *وانما ذلك الى الامام ان رأى ان يصير عليها عشرة فعمل وان رأى ان يصير عليها عشرين فعمل وان رأى ان يصيرها خراجا . . فعمل ذلك موسما عليه في ارض العراق خاصة .*

no doubt, due to the personal greed of the government representatives.<sup>1</sup> Perhaps the difference between taxes levied on kharāj-land and those on "milk" land was one of the main reasons. It may have been that this also was the result of personal motives.

Supervision by diwan al-kharāj became sharper towards the season of produce collection when interest was concentrated on the amount of money or produce which could be taken without regard to the status of cultivators.<sup>2</sup> By contrast, the owner of milk land (rab al-ḡayʿa) or his agent (al-wakīl) would spend much effort in an endeavour to solve the problems facing the cultivators. He would sometimes hire additional workers to help the peasants, and was always ready with advice and action. The condition of the land, whether it needed manure, extensive ploughing or to be allowed to lie fallow, was his first consideration. Not only the present, but its future needs were important to him.<sup>3</sup>

In the case of tax-farming and those who took the state lands or waqf land on lease, the main objective was to gain as large an amount of money as possible in order to cover the amount

---

Kharāj, p.33. Cf. Tabarī, Ikhtilāf, 232.

<sup>6</sup>For example see, Tanūkhī, Nishwār, II, p.144. Cf. Von Kremer, ʿAlī ibn ʿĪsa, p.80.

<sup>1</sup>Abū Yūsuf, op.cit., p.62.

<sup>2</sup>Supra, p.68, fn. 6.

<sup>3</sup>Ibn Waḥshīyya, op.cit. (MS.VL., no. 2485), fols. 24a-25a;

of their daman or lease and to add as much profit as could be collected regardless of the condition of either peasants or land.<sup>1</sup>

The question of the variety of grain products also differed with the type of land tenure. In the case of the private estate (milk) the landowner could direct his produce according to the circumstances and to what he considered to be more profitable. Such land could be converted to orchards and, if taxes were paid, there seems to have been no objection from the authorities as to what the choice was.

The books of Fiqh, however, speak of various types of tenancy such as muzāra'a, mukhābara, musaqāt, mubādhara and Kirā'. The many different terms used for tenancies reflect, in the case of al-muzāra'a in particular, the ability of the owner to decide the kind of crops he wished to grow.<sup>2</sup>

Qalqashandī, Subh, vol. XIII, pp. 123-31, 139-143.

<sup>1</sup>Abū Yūsuf says: "ورأيت الاتقبل شي من السواد ولا غير السواد فإن المتقبل إذا كان في قبالة فضل عن الخراج عسف أهل الخراج وحمل عليهم ما لا يجب عليهم وظالمهم واخذهم بما يجحف بهم ليسلم مما دخل فيه وفي ذلك وامثاله خراب البلاد وهلاك الرعية والمتقبل لا يبالي بهلاكهم بصلاح امره."

Kharāj, p.60.

<sup>2</sup>Yahyā, op.cit., p.118; Abū Yūsuf, op.cit., p.50; Khawārizmī, Mafatih, pp. 16-17. cf. Løkkegaard, Islamic taxation in the Classic Period, pp. 100-101, 107, 174-175; Yūsuf, 'Land, Agriculture..', IC, XXX (1957), pp. 32-3.

UNIVERSITY OF LONDON LIBRARY

SENATE HOUSE

LONDON, WC1E 7HU

Please note that application for all London University theses, whatever their college of origin, should be addressed to this Library, as above, and not to the college libraries. (College copies of theses are strictly for reference use, and may not be lent.)

L.3845\*  
JB.500  
12.6.72.

In the case of Kharāj land it would seem that strict regulations were in force to control the freedom of peasants in this respect. The sources speak of letters forwarded from the capital to the 'ummal of the kharāj in the Sawād demanding that certain directions be followed in the quality and quantity of produce to be cultivated in each season.<sup>1</sup>

### The Village

Village life was little affected by the progress in towns.<sup>2</sup> There are no descriptions of villages in Iraq during the period under consideration and it can be said that there are few references given by Ibn Wahshiyya which could be helpful here.<sup>3</sup> Any such references occur only in the course of discussion. They are found when he discusses the four climatic health zones of the Sawād. There he says that villages should be built on rising ground such as hillocks, if any were available; if not, an artificial elevation should be constructed of wood and mud. He gives

---

<sup>1</sup> Ṣābī, op.cit., p.216; Miskawāh, op.cit., pp. 27-8.

<sup>2</sup> In the second half of the 3rd century a large number of villages in the Sawād were reported as having been destroyed. This was accompanied by an administrative and economic collapse; communications were interrupted, and robbery and brigandry flourished, all cultivation was impossible. Tabarī, Ta'rikh, III, pp. 1556, 2105; Ibn Ḥamdūn, Tadhkira, (MS.RL), vol. IV, fol. 250a; Ibn Abī al-Ḥadīd, Sharḥ, vol. VIII, p.164; Tanūkhī, Faraj, vol. II, p.106; Ibn al-Āthīr, op.cit., vol. VII, pp. 54-5, 94. Adams in Land behind Baghdad (pp. 103-4) produces an archaeological survey of the area. He proves that in the early years of the 10th century A.D., 62% of all recorded settlement outside Baghdād had been abandoned. Cf. Zaidān, Tamaddun, vol. IX, p.179; Durī, Iqtisādī, p.47.

<sup>3</sup> Ibn Wahshiyya, op.cit. (MS.VL), fol. 23a.

as an example that, when the people of 'Aqarqūfa, the area south of Baghdād, faced such a situation, they erected many structures on their alluvial plain. Such elevations served a double purpose; one for the advantage of better health and the other a better ability to watch over land cultivations and enabled them to take emergency precautions against misfortune by pest or flood or other enemy.<sup>1</sup>

The houses were usually built either of baked or sun-dried bricks with high walls and many apertures in a position to allow sunlight and complete ventilation to purify the air and prevent septic disease. He also pointed out that isolated dwellings were preferable, but if space were confined they could be built adjoining each other on condition that the necessary ventilation was ensured. High walls were insisted upon in order to leave space for many apertures. Various kinds of tree-trunks were included in the building material for use either as columns or rafters for ceilings and the wood of the tamarisk, cypress, pine and walnut were used to line the ceiling and afterwards covered with a mixture of mud and straw.<sup>2</sup>

Ibn Wahshiya spoke of the practice of using plaster to cover walls and floors, especially those built for storage purposes. He mentions also the necessity of a resident blacksmith, carpenter and potter among the personnel of the village to meet

---

<sup>1</sup> Ibid.

<sup>2</sup> Ibid., p.23b. Cf. Yāqūt, Mu'jam, vol. I, p.669.

the needs for implements, buildings and utensils which were necessary for the community, or were in daily use for livestock or cultivation purposes.<sup>1</sup>

### Health Conditions in the Climatic Zones

The Sawād produced four kinds of climatic conditions, and the health of the inhabitants of each zone varied accordingly.

Ibn Waḥshīyya denotes them as follows:<sup>2</sup>

(i) The Southern Zone, which extends from Bābil in the north to the Persian Gulf in the south, and includes the Baḡā'ih area as it does also the Sūrā and Barbīsmā tussajs, was the most unhealthy. He describes the climate as bad, unhealthy and pestilential, particularly at Sūrā and Barbīsmā, where humidity was extremely high and where, in spite of the precautions taken, there were frequent outbreaks of disease.<sup>3</sup>

(ii) The Eastern Zone comprised the area between Ḥulwān in the North-east to Ubullāh on the river Tigris in the South-west. It covered, in fact, all the north-eastern part of Iraq. The climate in this area was less humid than in the eastern zone, and

<sup>1</sup>He says that there was need of such craftsmen in the villages in order to preserve community life and prevent villagers from compulsory journeys to the towns, and the consequent loss of field labour involved, ibid.

<sup>2</sup>Ibid., fols. 22b-23a.

<sup>3</sup>He describes the condition in Ṭirnābādḥ village as:

while Sūrā was  
ibid., fol. 22b.

"ردية ربما عثر فيها الوباء كثيرا"  
وبية دائما . . . عفنا "ووباء"



better weather conditions prevailed. Here they were reasonably good, epidemics were much less in consequence, and the inhabitants were much healthier than in the eastern zone.

(iii) The Northern Zone. This extended from 'Ukbarā' in the south beyond Tikrīt in the north and consisted of the most important passages in Iraq including the four surrounding Baghdād, in addition to the Sāmarrā' area and those irrigated by the Qāṭūl Canal. The climatic conditions in this zone were described as better than in all other zones. Epidemics were almost unknown and the inhabitants enjoyed the best health in the country.

(iv) The Western Zone lies on both sides of the upper part of the Euphrates river, within the Iraqi borders. It consists of the Anbār and the upper and lower Bājisrā areas. It is described as being better <sup>it</sup> when compared with the southern zone. Humidity is low and the air is fresh. Climatic conditions seem to have been reflected in the inhabitants themselves. They are described as being a mild and tender people.<sup>1</sup> Except for these traits in character, their condition of life was similar to that of the people of the eastern zone.

Some sources, however, refer to pestilence and plagues (wabā') in various parts of Iraq during the 3rd century. There is no specific definition given to this word, but the sources indicate that a large number of deaths resulted from 'waba'

<sup>1</sup> Ibid., fol. 23a.

"و هو بعيد من وقوع الوباء فيه و أهله أصح ابدا  
والين قلوبا"

cf. Hashimī, op.cit., p.511.

in various parts of the country. In this connection, severe attacks of coughing are mentioned.<sup>1</sup>

The Arabic books of medicine give much information concerning various types of disease and the prescriptions that promote their cure. It is, however, incorrect to claim that this particular information is given concerning cases which actually occur in Iraq. It is possible that the references are peculiar to the period under consideration. Moreover, it is abundantly clear that much of this kind of information was derived from Greek knowledge as the quotations and references show.<sup>2</sup> It can, therefore, be said that the Arabic books of medicine cannot be considered to be actually representative of the health conditions of the inhabitants of Iraq during this era.

Other sources speak of mosquitoes (baqq) which multiplied wherever there were large areas covered with water and the climate had a high percentage of humidity. Such areas were perfect breeding grounds for these insects. It is reasonable to suppose that after each season of high flood, mosquitoes and other similar insects were more prolific and that the inhabitants of the areas

---

<sup>1</sup>In this connection Ibn al-Athīr speaks of a common 'Wabā' prevalent in the year 258/871, but gives no specific description of this disease. *Kāmil*, vol. VI, p.31, also vol. VII, p.102.

<sup>2</sup>Martin Levey, *Medieval Arabic Toxicology*, 'The Book of Poisons of Ibn Wahshiyya and its relation to early Indian and Greek texts', transaction of the American Philosophical Society, vol. 56, part 7 (1966); *EI*<sup>2</sup>, 'Ibn Wahshiyya', s.v.

faced the danger of malaria and other infections.<sup>1</sup>

Several crises, probably many of this nature, had to be faced by the Iraqis during this period. There would, no doubt, be sharp rises in prices caused by flood destruction, wars and revolts which would doubtless be accompanied by the destruction of many villages or residences.<sup>2</sup> Economic blockading, restrictions or even mass killings would probably ensue.<sup>3</sup> The sources indicate that there was starvation in some cases.<sup>4</sup> Whether or not the sources specifically clarify these conditions, it is presumable that their climax would be malnutrition among numbers of the inhabitants, and the human body would, because of them, be liable to attack from disease.

In addition, Ibn Wahshiyya refers to the insanitary methods of collecting rainwater for drinking purposes. Holes, he says, were dug or slopes utilised for the purpose and no care was taken to ensure that either the ground or the water was cleansed; the cattle manure was even used to cement the sides of the ponds. He advises that such practices should be abolished and that only rain-water which was collected from cleansed roofs of the houses

---

<sup>1</sup>Yāqūt, Mu'jam, vol. I, p.669. cf. Hashimī, op.cit., pp. 551-2.

<sup>2</sup>Tabarī, Ta'rikh, III, p.1066; Ibn al-Athīr, op.cit., vol. VI, pp. 157, 376; vol. VII, pp. 55, 81-2; Ibn Abi al-Ḥadīd, Sharḥ nahj al-balāgha, vol. VIII, pp. 126, 149, 164.

<sup>3</sup>Tabarī, Ta'rikh, III, p.2098; Ibn al-Athīr, op.cit., vol. VII, pp. 94, 97-99; Ibn Abi al-Ḥadīd, op.cit., vol. VIII, pp.149, 164-5.

<sup>4</sup>Tabarī, Ta'rikh, III, pp. 1066, 1885, 2210; Taifūr, Baghdād, p.134; Ibn al-Athīr, op.cit., vol. VII, pp. 108, 135, 195.

should be drunk. He advised that it should be directed through wooden roof-gutters into a cistern for that purpose.<sup>1</sup>

In spite, however, of ibn Waḥshiyya's claim concerning the responsibility of landlords' agents to provide the sick peasant with medical attention and the medicine prescribed by the doctor (ṭabīb) who must visit the patient<sup>2</sup>, there seems to be no evidence that this was carried out. On the contrary, Qiftī states that until the year 301 A.H. (913 A.D.) there were no physicians in most of the Sawād area.<sup>3</sup> It was 'Alī ibn 'Īsā who first ordered that the Sawād must be provided with doctors whose duties were to make regular visits to all the areas, to visit the sick and supply them with medicine.<sup>4</sup> The logical explanation of ibn Waḥshiyya's statement would appear to be that he meant by the aṭibbā, the localexperienced herbalist.

### The Social Structure of the Village

There seems to have been no change in the social structure of the villages of the Sawād. Those inhabiting the countryside

---

<sup>1</sup>Ibn Waḥshiyya, op.cit. (MS.VL), fol. 23a.

<sup>2</sup>"وان يحضر للاجرة في كل وقت يمرض احد هم طبيبيا ينظر ذلك الممرض فيعالجه ."

ibid.

<sup>3</sup>Qiftī, Akhbār al-hukamā', pp. 193-94.

<sup>4</sup>'Alī ibn 'Īsā wrote a letter to Sinān ibn Thābit, the general director of Baghdād hospitals, expressing his sympathy with the sick inhabitants of the Sawād who had received no medical

and part of the newly created towns, were Nabateans who spoke in broken Arabic and adhered to their pre-Islamic traditions although they had been converted to Islam. The Nabateans were, in fact, the main element among the cultivators in Iraq and although people of other origins, such as Negroes and Indians, had settled among them, the peasants of the Sawād continued to be known as Nabateans.<sup>1</sup> The pattern of the village seems to have been left unchanged after the Arab occupation. In order to gain a clear picture of the life in them during the 3rd century A.H., it is necessary to classify the different types of workers.

Both ibn Waḥshīyya and Ṣabī produce information which indicates that, with few exceptions, the landlords lived in the town and appointed agents (al-Quwam or al-Wuhata) in the villages to look after their interests.<sup>2</sup> The function of the agent (al-wakīl) was discussed thoroughly by ibn Waḥshīyya in a chapter entitled "fī amr al-wukalā'"<sup>3</sup> (on agents' affairs). After

---

attention. The vazir gave orders to rectify the matter:  
 "فكرت فيمن بالسواد من اهله وانه لا يخلو من ان يكون فيه من لا يشرف متطهب  
 عليهم لخلو السواد من الاطباء . . فتقدم بانفاق متطهين وخزانة من الاروية  
 والاشربة يطوفون بالسواد و يقيمون في كل صقع منه مدة ما تدعو الحاجة الي  
ibid.  
 مقامهم ."

<sup>1</sup> Arabs and Persians formed a large percentage of Iraq's population, and were mostly townsfolk, see: Tanūkhī, op.cit., Vol. VIII, p.100; Muqaddasī, op.cit., p.108. Cf. Dūrī, Iqtisādī, pp. 47-8; EI<sup>2</sup>, 'Baṭīha', s.v. In the Sawād of Baṣra the Zanj were prevalent among the population. They chiefly worked in the salt-plains north of the city. See Ṭabarī, Ta'rikh, III, p.1742. Balādhurī says that, during the reign of Ḥajjaj, many tribes were taken from the Sind valley in India to the marshlands in the area of the eastern part of the Baṭīha. Ansāb, vol. II, pp. 109-11.

<sup>2</sup> Ibn Waḥshīyya, op.cit. (MS.VL.), fol. 23a.

<sup>3</sup> Ibid., fols. 23a-25b.

describing their special function he more fully details their work. This included the supplying of seed (budhūr) and implements (al-'ālāt) and directing and supervising the daily work of the farm. It was his duty to hire extra workers when necessary and thus secure the interests of the landlord.<sup>1</sup>

The dihqān was the Persian village chief. Professor Lambton considers his rank to be the lowest among those whose power resulted from hereditary right to administer local administration. Professor Lambton describes his position as being the most important peasant of the district and owner of a small amount of land.<sup>2</sup> When the Sassanid Empire was conquered by the Arabs, the dihqān - particularly in the Sawād - acted as liaison between the new Government and the inhabitants of the village.<sup>3</sup> Under the Abbasids, the dihqān assumed the rôle of a notable person and he was generally consulted on problems concerning irrigation and lands.<sup>4</sup> Moreover, new Arab landowners gradually outclassed the dihqāns whose function became reduced to helping in the collection of taxes; a task for which his local knowledge rendered him

---

<sup>1</sup> Ibid., fol. 25a.

<sup>2</sup> Lambton 'Reflections on the Iqtā'', Arabic and Islamic Studies (Hon. of Gibb), Leiden (1965), p. 359. cf. Løkkegaard, op.cit., p.111; Duri, Iqtisadi, p.48.

<sup>3</sup> Lambton, op.cit., p.360.

<sup>4</sup> Ya'qūbī, Buldān, p.273; Šābī, Wazarā', pp. 256-7. f. Zaidān, op.cit., vol. II, pp. 182-3; Duri, Iqtisadi, p.48,

invaluable.<sup>1</sup> As a remuneration for his services the dihqān was allowed to levy a special surtax on cultivators which was known as ḥaqq al-dahqma.<sup>2</sup>

There were also the original landowners (arbāb al-ḍi'yā) who, when they cultivated their own lands, were referred to as tunnā', akirra, fallāhīn and zurra'.<sup>3</sup> These terms appear to refer to peasants who held no fixed lease. Some of these occasionally seem to have occupied a subordinate position on ḍi'yā' estates, and in some cases to possess personal property.<sup>4</sup> Others were presumably day labourers.<sup>5</sup>

A yet lower stratum of agricultural workers was often classed under the terms 'ulūj ahl al-qurā' and ahl al-rasātiq, and were bound to the land as serfs.<sup>6</sup>

A multiplicity of manual workers was the essential factor in successful cultivation.

Landlords who had reclaimed waste land in the Sawād during earlier periods were described as ta'allafū al-akirrata wa'l-zurra', a literal translation of which is 'they gathered peasants

<sup>1</sup>Tabarī, Ta'rikh, vol. VII, p.29; al-Khaṭīb al-Baghdādī, op.cit., vol. I, pp. 12-3.

<sup>2</sup>Tanūkhī, al-Faraj ba'd al-Shidda, vol. I, p.55. Cf. Løkkegaard, op.cit., pp. 72, 91, 234; Duri, Iqtisādī, p.48.

<sup>3</sup>Tanūkhī, Nishwār, vol. I, p.4; EI<sup>2</sup>, 'Filāḥa', s.v.

<sup>4</sup>Sābī, op.cit., p.254. Cf. Løkkegaard, op.cit., p.197.

<sup>5</sup>Abu Yūsuf, op.cit., p.52.

<sup>6</sup>The jurists and other sources speak of this matter too broadly to provide a specific example, see Tabarī, Ikhtilāf, p.225; Abu 'Uba'id, op.cit., p.74.

and sowers'.<sup>1</sup> The sources provide little information concerning their origin or the terms of their tenancy. Presumably they were natives of the areas and probably had been offered reasonable terms of employment by the landlords, or at least protection from the greediness of tax-collectors and other officials.<sup>2</sup> Another alternative may have been that these peasants were brought from neighbouring land; this would, of course, mean decline in the produce of their native habitat for the benefit of the newly reclaimed lands. It would appear that most of the new landowners had acquired land which had been reclaimed. The land which had already been under cultivation must have suffered as a result of the withdrawal of workers who gave it the manuring and irrigation which had assisted its productive capacity. In addition there was the burden of taxes on the land which was deserted, and which would rest very heavily on the shoulders of those who remained.<sup>3</sup> Several factors conspired to reduce the able-bodied population and the number of those who remained were often insufficient to cope with the necessary work.

So many changes took place among the original landowners of the country, brought about by a variety of reasons, during the

---

<sup>1</sup> Balādhurī, futūh, p.413.

<sup>2</sup> Qudāma, nubadh, p.241; Tha'ālībī, Khass, p.168. cf. Zaīdān, op.cit., vol. II, p.131.

<sup>3</sup> Ṣābī, op.cit., p.340; Niwāīrī, Nihāya, vol. VIII, p.252. cf. Løkkegaard, op.cit., p.123.



period following the occupation of Iraq. Peasants were freed from Persian practices and traditions which had tied them to the land. Under the effective nomadic simplicity of character which respected freedom and the theoretical principles of Islam, concerning equality and the abolition of serfdom, no steps were taken at that time to compel peasants to remain in their villages. There were several other factors also, such as the destruction of irrigation schemes and increasing salt percentage in the cultivated land. Mal-administration which probably followed the wars, conceivably induced many to seek the towns to which peasants were encouraged to emigrate. The new cities established in Iraq, which had developed from military and administrative centres into those of trade, economy and industry, together with higher living standards, were no doubt an attraction. The need for many workers and the higher wages offered probably proved irresistible.<sup>1</sup>

There were two classes of field hands, those of freemen and slaves. The freemen lived either in towns or villages. Ibn Waḥshiyya referred to them as 'peasants and others' (min al ṣunnā')<sup>2</sup>, and the social view accorded them precedence over

---

<sup>1</sup> Arabic aristocracy welcomed the influx of labour into the towns which solved their problems. This may account for Arab opposition to Hajjaj's policy. The easier life offered to peasants under town conditions also probably accounts for their readiness to support Ibn al-Ash'ath's revolt. During the Abbasid dynasty there is no mention of any similar peasant mass migration. Ṣābi, however, provides the general terms offered by the vizir 'Alī ibn al-Furāt to those who would return. Ṣābi, Wuzarā', p.258.

<sup>2</sup> Ibn waḥshiyya, op.cit. (MS.VL.), fol. 23a.

craftsmen.<sup>1</sup>

In theory all peasants were considered to be "free" men, but in practice it was often the reverse. The peasants of the countryside were classed as being in a lower stratum of society than those of the town, and their standard of living when contrasted with theirs, as depicted by the sources, was considerably lower.<sup>2</sup>

The second and yet lower class of field workers was the slave. For various reasons their numbers were multiplied in Iraq. Wars added to their number and the captives were drafted to work on the land.<sup>3</sup> Another source of addition was slaves who were sent from the provinces as part of the revenue payment.<sup>4</sup> Again, many were purchased from slave merchants and the numbers also multiplied from breeding.<sup>5</sup> They were drafted into various kinds of work. Those sent to the fields of Iraq were divided into two groups. Some were sent to do the heavier work of the land, such as lumbering, fetching, carrying and digging.<sup>6</sup> In the case of the Zanj, Tabarī considers them as navvies or serfs (kassābīn), working in the orchards and plains of Basra. They

---

<sup>1</sup> al-Dimashqī, al-Ishāra ilā mahāsīn al-tijāra, p.43.

<sup>2</sup> EI<sup>1</sup>, 'Nabateans', s.v.

<sup>3</sup> Sources confirm that a large scale sale of slaves occurred after military activity by the Caliph Mu'tasim in Asia minor.

<sup>4</sup> 'Abdullāh ibn Tāhir, Amīr Khurāsān, sent 2,000 slaves yearly to the central government in part-payment of revenue. See, Ibn Khurradādhbeh, op.cit., p.39.

<sup>5</sup> Ya'qūbī produces a detailed description of the slave market 'Sūq al-raḡīq' in Samarrā', Buldan, p.260. Cf. Dūrī, Iqtisādī, p.64.

<sup>6</sup> L. Massignon, s.v. 'Zanj', EI<sup>1</sup>.

were mainly imported negro slaves. Ṭabarī mentions that they worked in large groups, sometimes consisting of as many as 15,000, which was the number given for those working in the fields of Dujāil al-Ahwāz.<sup>1</sup> In the Baṭiḥa of Baṣra, gangs of 500-5,000 labourers were penned, homeless and hopeless. They worked for their masters without reward; and their food, which was very poor, consisted of a few handfuls of flour, semolina and dates.<sup>2</sup> Other sources speak of slaves doing the work of peasants and state that they were treated like cattle.<sup>3</sup>

The second group was that of the serfs who lived in the villages and were considered as part of the land. They were transferred with the land when it passed to a new owner.<sup>4</sup> Probably they were of Nabatean origin and were only considered in relation to their capacity for work.

The *ziṭṭ*, who were brought from the Sind valley during the Umayyad period, were also perhaps considered as serfs.<sup>5</sup> Taifūr, however, produces evidence of the official view in the matter of serfdom when he quotes the Caliph Ma'mūn's acceptance of 'Omar's

---

<sup>1</sup>Ṭabarī, *Ta'rikh*, III, p.1742.

<sup>2</sup>*Ibid.*, III, pp. 1748, 1750-1.

<sup>3</sup>Abū Yūsuf, *op.cit.*, p.17; Rabī'at al-ra'ī, *op.cit.*, p.17; Muqaddasī, *op.cit.*, p.119.

<sup>4</sup>In his *Hikāya*, Abū'l Qāsim al-Baḡhdādī, p.87, refers to "anbaṭ al-qurā wa 'abīdihā".

<sup>5</sup>Balādhurī, *Ansāb*, vol. II, pp. 109-110.

view of the position of the Nabateans. This allowed any freeman to sell his Nabatean neighbour as a slave if his finances were low enough for him to be in need of the money.<sup>1</sup>

Wages were affected by the demand for services, and whether there were many unemployed. It is highly probable to suppose that wages were considerably higher during periods of urgent need. Such periods would occur in flood seasons when dams and water-beds needed urgent repair; they would be higher during periods of ploughing, harvesting, threshing and winnowing, periods which would obviously need many more workers. Būzjānī speaks of payment in two ways: one was on a daily basis (*muyāwama*) or by units.<sup>2</sup> In harvest time, it was probable that the worker received a percentage of the total produce as wages. Abū Yūsuf refers to the wages of those workers who divided the crops between partners. He states that they were paid direct from the total product, not in cash but in kind.<sup>3</sup>

---

<sup>1</sup>Ṭaifūr (Baghdād, p.73), says that the caliph Ma'mūn quoted Omar I as having said:

"من كان جاره نبطيا واحتاج الى ثمنه فليبعه"

<sup>2</sup>Būzjānī (*Hawī* (MS.) fol. 166a) mentions these two methods. He says:

"والذي جرت العادة في استيفاء القطع والانشاء في السكور  
والبزندات ان يزرع اوله وعرضه وسمكه ."

*ibid.*, p.143b; he also

ment: "... فانذا فرغت من التقدير اخفت الى ذلك اجرة الافراد ..."

*Ibid.*, p.150a. Cf. Cl. Cahen, 'Le Service de l'irrigation en Iraq du début du XIe Siècle', *BEO*, XIII (1949-51), pp. 125, 127.

*Ibid.*

du <sup>3</sup>Abū Yūsuf, *op.cit.*, pp. 29, 30.

<sup>3</sup>Abū Yūsuf, *op.cit.*, pp. 29, 30.

### Chapter III

#### THE AGRICULTURAL SYSTEM

##### System of Rotation

The instructions to the farmers of Iqlīm Bābil (middle of the Sawād) contained in Kitāb al-filāḥa al-Nabatiyya have a special value.<sup>1</sup> They present a vivid picture of the Rotation System in practice in Iraq during the 3rd century A.H. Its value lies in the unique information given of its own special period in contrast to that presented for earlier and later periods.<sup>2</sup> These latter, though informative, must be distinguished from this particular era. They entirely concern the century during which they were written and this must be borne in mind. Even today, instructions and examples given in the optimum books on agronomics are not more practical or realistic.<sup>3</sup> Kitāb al-filāḥa al-Nabatiyya can be regarded as a book on agronomics, although it contains other matters which

---

<sup>1</sup> El<sup>2</sup>, s.v.; infra, fn. 3, p.87, fns. 3-5.

<sup>2</sup> In spite of Ibn Wahshiyya's remark concerning this translation of a Chaldean work, it is obvious that a large amount of the information included in Kitāb al-filāḥa al-Nabatiyya was his own view, and the difference is clearly distinguishable.

<sup>3</sup> Von Gutshmid, 'Die Nabataisch Landwirtschaft und ihre Geschwister', Z.D.M.G., XV (1861), pp. 1-100, and Nöldeke, in 'Noch Einiges unter die "Nabataische Landwirtschaft"', Z.D.M.G., XXIX (1875), pp. 445-55, stated that the Kitāb al-filāḥa al-Nabatiyya was a forgery, dating back to the beginning of the 4th/10th century. Even with the acceptance of this view, the information thus obtained reflects the knowledge prevalent during the 3rd/9th century. Nöldeke claims that the author of the forgery was Abū Ṭālib al-Zayyāt; there would, however, appear to be neither evidence nor disproof of this claim. Moreover, as Ibn Wahshiyya enumerates several Greek works as one

are founded more on superstition than on realism.<sup>1</sup>

Ibn Waḥshiyya sometimes quotes from earlier sources and adds his own views. His references to agricultural activities which were in practice in various parts of Iraq are most enlightening.<sup>2</sup> He describes what he saw during his journeys through the countryside.<sup>3</sup> In any case, as has been stated, his book represents the period under consideration and the information he gives reflects the agricultural life of his period and coincides with that from other

of his many sources of information, there would appear to be no need to emphasise it since he stresses the influence of Greek works upon it. *Ibid.*, cf. E. Wiedemann, 'Zur Nabataischen Landwirtschaft', *Z.S.I.* (1922), pp. 201-2; Fahd, 'Ibn Waḥshiyya', *Et*<sup>2</sup> s.v., *idem*, 'Retour a ibn Waḥshiyya', *Arabia* (1969), pp. 83-88.

<sup>1</sup>In his description of the date-palm, ibn Waḥshiyya mentions a special kind of weakness in some of the trees as a result of passion between them. Two trees would sometimes lean towards each other and produce a certain 'murmur' as he claims. *Kitāb al-filāḥa* (MS) No. 236 (BL), Vol. V, fol. 58ff.

<sup>2</sup>See *Kitāb al-filāḥa*, Vol. III, Bodleian Library, Oxford, No. Hunt 340, fol. 85 b. "وقد رأيت . . ."

and fol. 133b. "وهو يزرع فبالا سافل من اقليم بابل بناحية الابلق والمصب."

and (MS. VL) fol. 72: " . . . فبلغني الآن ان اهل باجرما وسقي جوخي . . ."

<sup>3</sup>MS (BL), No. Hunt, 340, Vol. III, fols. 85:

"وقد رأيت في كثير من البلدان التي دخلتها مثل البصرة والاهواز . . ."

after which he mentions Wasīṭ, Kūfa, Madīnat as-Salām (i.e. Baghdad) and Qissīn sub-district.

sources.<sup>1</sup> It should, however, be noted at this stage that the most important factor from the cultivator's point of view was to obtain the largest profit during the season and that was probably the greatest incentive for his efforts. The condition of the land, or whether it had become enfeebled by over-production was a minor point of consideration. Parts of the land would reluctantly be allowed, perhaps, to lie fallow for a period and other parts which had not been cultivated would be brought into service again. The author of Kitāb al-filāḥa points out that the best remedy for weakened land is to let it rest, without any cultivation or even ploughing for a period. This, he said, would help it to regain its ability for profitable production.<sup>2</sup> He was aware that such a method was harmful if extended over too long a period and this fact also seems to have been realised by cultivators.<sup>3</sup>

<sup>1</sup>When ibn Waḥshiyya quotes information from earlier sources, particularly when circumstances have changed concerning it, he generally comments upon it. For example, there is information quoted concerning a certain type of radish which is quoted as "arṣāḥ"; following this he says:

" درست و انمحت وما يعرف في اقليم لباهل ولا في غيره ولا رأيه قط "

MS. (BO), Vol. III, fol. 186a.

A similar example occurs when he mentions one special type of onion which was known as "zīr". He speaks of its "hot" or "strong" quality, that:

" لا يقوى على اكله نيئا الا الاكرار و بعض الجرامة و بعضا كرة اقليم بابل "

Ibid., fol. 200a.

<sup>2</sup>This practice was in use in Iraq during the period under consideration. Ibn Ḥamdūn in his Tadhkira (MS. R.P.), Vol. IV, fol. 247a, estimates the cultivatable land in Iraq as representing two-thirds of the entire total of Iraqi territory; half of this (i.e. one-third) was to be allowed to lie fallow and the other half was to be cultivated. cf. Nuwāirī, Nihāya, Vol. VIII, p.206.

<sup>3</sup>Ibn Waḥshiyya, Kitāb al-filāḥa (MS. BL), fols. 149a-150a.

Wahshīyya indeed discourses in a long passage which gives reasons and explanations as to why it is harmful to allow land to lie fallow for too long a period and reaches the conclusion that fallow land is inferior for cultivation<sup>1</sup> ('al-arḍ al-bawr adwanuhā lil-zirā'a).

A practical method of fallowing would appear to be either (a) to divide the land into two parts, cultivating one of them for one year and the other in the following year, thus allowing each part to lie fallow for one year's recuperation, repeating the process year by year.<sup>2</sup> The alternative (b) was to cultivate part of it as summer plantation and the other for winter produce, leaving each part fallow for approximately six months.<sup>3</sup> Both methods, however, have their drawbacks. The first necessitates the neglect of approximately half of the total cultivateable land while the practice of the second method ultimately impoverished the soil. The cultivators were, themselves, aware of these facts and many of them pursued a different course. This was the rotary system which was used in Iraq during the 3rd century A.H., a

---

<sup>1</sup> Ibid.; Ibn al-'Awwām, Kitāb al-filāḥa, Part II, Chapter XVII. fols. 120a-b. Cf. Russel, J.C., Saline Land Management Practices in Iraq (1958), pp. 4-5.

<sup>2</sup> Ibn Ḥamdūn, Tadhkira (MS. R.P.), Vol. IV, fol. 247a; Nuwīrī, Nihāya, vol. VIII, p. 206; see also Ibn al-'Awwām, op.cit., fol. 121a, Mawardī, op.cit., p. 167; cf. Dūrī, Iqtisādī, p. 49.

<sup>3</sup> Ibid. Cf. Ḥamāda, op.cit., p. 225; al-Dāhirī, al-Tanmiya al-Zirā'iyya fi'l Mujtama'at al-taqlidiyya, p. 14.



method which can be reconstructed from the sources as follows:

- a) Weeding. The cultivator must clean the field by ridding it of all kinds of weed<sup>1</sup> ("wa yunaqqihā min al-daghal wa'l nabāt Kabīrihī wa Ṣaghīrihī").
- b) Ploughing and harrowing. should follow the weeding and should be very thoroughly carried out. It should commence a considerable time before the season of cultivation and must be repeated at least three times. At the third or final ploughing the furrows must be wider. The sources speak of four kinds of ploughing relating to the time of each operation and the purpose of it. In this connection the Kasr, shaq, fath and retāila ploughings are mentioned.<sup>2</sup>
- c) Clod-breaking. At the time of ploughing and harrowing, the farmer was advised to collect and throw out any bricks or stones he might find and to crush the clods which were left.<sup>3</sup>

---

<sup>1</sup>Ibn Waḥshiyya (MS. B L), Vol. III, fol. 16b. Cf. Russell, op.cit., p.5.

<sup>2</sup>The "Kasr" was the first ploughing operation, and was made with a wide plough; the second, known as "shaqq" had closer furrows than the first, while the "fath" was the third operation of ploughing in the same field. Advice was given, however, that the third step should be repeated, but not before the irrigation water had had time to become absorbed into the soil. The furrows at this third stage of ploughing should be of medium spacing at the first ploughing while in the second and final stage, the 'harth al-rataila', the furrows should be close together. Ibn Waḥshiyya, al-filaha (MS. B.M.), fols. 121a-b.

<sup>3</sup>Ibid., fol. 120b.

"وَكذلك تبعد الحجارة والمدر منها ويدق من المدر ما كان عظيما حتى يصير  
سحيقا"

d) Inversion. Twenty days before sowing or planting, the ploughed and harrowed field must be turned over and the soil completely inverted in order to gain the greatest benefit from the previous operations. The cultivator must reach the sub-soil to which the plough gives access. Without doing this all advantages of the preceding methods are lost, according to Ibn Waḥshiyya.<sup>1</sup>

e) Sowing. Next follows his instruction concerning sowing. This, of course, varies according to the kind of crop, the method of irrigation and the local tradition applying to various areas. The fertility of land and humidity of the season had considerable influence in this respect. Wheat and barley, for example, were sown in Iraq in three different ways. One method was by means of a plough which had an attached funnel through which the seed was dropped into the furrows.<sup>2</sup> This was described as the easiest and most effective way of scattering the correct amount of seed and ensuring its target. Another way was to sow the seeds in the field before the final ploughing took place; yet a third method was to sow the seeds after ploughing and then to cover them.<sup>3</sup>

---

<sup>1</sup>Ibid., fol. 121a; ibn Waḥshiyya quotes the peasants as saying:

” لا حرث لمن لم يقلب ”

<sup>2</sup>Ibn Waḥshiyya, op.cit., fol. 26a.

<sup>3</sup>Ibid., fol. 30b. ” ان تغطية الحنطة والشعير بايدي الناس اصلح لها  
واجود من تغطية البقر في حال الحرث ”

Ibn Waḥshiyya says that cultivators should divide their periods of sowing into three different times of the season in order to conserve their grain. Thus, if the weather were unusually inclement, or there were a plague of locusts or other pests, one part at least of the crops would be salvaged and only part of them be lost. The early crop was called harfī, the middle crop mutawassit and that of the last sowing aflī or khiri. Another purpose of such sowing was that precautions could be taken against any exigency of blight, climate or flood.<sup>1</sup> Moreover, he states that the average rate of seeding for wheat should be 7-9 seeds for each hand-span of the field; for barley it should be 9-10 seeds, and for beans, chick-beans and similar crops, the average rate per hand-span should be 4-7 seeds. If the rate exceeded this average it was known as latīf rate and, if lower, as khafīf. The rate in the case of beans was one ratl for each 1,440 square dhira'.<sup>2</sup> Rates would, of course, vary with the potentiality of the land and the method of its irrigation. Ibn Waḥshiyya comments that knowledge of the fertility of the land and the advice of an expert agronomist were essential for the best results.<sup>3</sup>

---

<sup>1</sup>Ibid., fols. 29a-29b.

<sup>2</sup>Ibid., fols. 65b-66a; cf. ibn al-ʿAwwam, op.cit. (MS B.M.), fol. 126a.

<sup>3</sup>Ibid., fol. 126a.

f) Irrigation. An immediate problem concerning irrigation practices was how much or how little water should be used. Too large a quantity would create the danger of a too rapidly rising water-table and excessive irrigation could create those conditions by which capillary action would bring the saline water from below up to the surface. If, on the other hand, too little irrigation water was used which was barely sufficient for the needs of the crops, no necessary surplus would be there to leach the salts deposited by previous irrigations below the root zone. The salt content in the soil would thus increase to a point of harmful concentration.<sup>1</sup> Unfortunately, the sources give little concrete evidence on this point.

The usual method of irrigation of cereal crops and, sometimes, even of cotton, seems to have been that of furrow irrigation. In the cases of vegetables, cotton and herbs, the field was divided into basins or beds in order to ensure thorough watering.<sup>2</sup> Orchards, trees and grapevines were commonly planted at the edge of streamlets, or small irrigation canals.<sup>3</sup> Rice, however, required a different method. The young plants, after being transplanted, were probably either covered with shallow water continuously maintained, or

---

<sup>1</sup>Russel, op.cit., pp. 4-5.

<sup>2</sup>Ibn Wahshiyya, al-Filaha (VL), fols. 69b, 72b-78a, 105b-110a; idem (MS. B L. Hunt 340), 145b-150a; cf. Muqaddasi, op.cit., pp. 118, 141; ibn al-Awwam, op.cit. (MS. B M) fol. 132a.

<sup>3</sup>Ibn Wahshiyya, op.cit. (MS. V L 2485), fols. 126a-160a.

planted in shallow basins which were filled during most of the season with rising water.<sup>1</sup>

The frequency of irrigation varied according to the kind of crops and was affected by the season. Irrigation of wheat, according to Ibn Waḥshīyya, should be made five times. One was made before weeding took place; three basic irrigations were given during the growing period. The time of the fifth was optional and to be given at some time during the ripening in order to obtain a specially good yield. Sometimes a field of barley depended entirely or mostly on rain. The number stipulated for barley was similar to that for wheat, but sometimes it required only four instead of five irrigations.<sup>2</sup> For other produce, the needs for cultivation - as already stated - varied according to temperature, wind and humidity or to the special crop. For example, cotton needed regular irrigation, once in every ten days; some vegetables needed weekly irrigation while others, such as onions, carrots, turnips and similar kinds could survive for two or three weeks on one irrigation.<sup>3</sup>

g) Reaping. In Kitāb al-filāḥa al-nabatiyya the author refers to the custom of reaping the barley before the wheat.<sup>4</sup> He says

<sup>1</sup> Muqaddasi, op.cit., pp. 113, 119; Ibn Waḥshīyya, op.cit. (MS. V L 2485), fols. 63a-64b. (Ms. B L. Hunt 340), fols. 97a-99b; cf. Ibn al-ʿAwwām, op.cit. (MS. B M) fol. 127a.

<sup>2</sup> Ibn Waḥshīyya, op.cit. (MS. B L Hunt 340), fols. 26a-27b, 33b-34b, 37a.

<sup>3</sup> Ibid., fols. 86b, 145b, 189a; cf. Ibn al-ʿAwwām, op.cit., (MS. B M) fol. 132a.

<sup>4</sup> Ibn Waḥshīyya, ibid., fol. 37b.

that the grain must not be allowed to get too dry. He states that after reaping, the harvesters should leave it with the ears facing east and the end towards the west to ensure the correct dryness.<sup>1</sup> The best time for reaping was in the later hours of the day or during the early hours of dawn. At these times the atmosphere was fresh, humid and favourable to the harvesters.<sup>2</sup> The workers seem to have been organised into groups, some busy with cutting, others with heaping the crops into small piles as a first step to assembling the entire harvest of one field in one place to convey it to the threshing floor.<sup>3</sup>

h) Preparation of Threshing-floor and bringing in the harvest.

Instructions concerning the preparation of the threshing floor are also carefully detailed. The land selected must be hard, flat and an elevated site at a distance from vegetable fields, orchards or residences. After completely levelling and smoothing the ground, it should be covered with small pieces of metal and sawdust which should be rammed hard on to it. When the area was ready, the entire harvest, which had been spread around the field in small piles, was to be collected together at the threshing floor and shaped

---

<sup>1</sup>Ibid.

<sup>2</sup>Ibid. (MS. V L 2485) fols. 55b-56a.

<sup>3</sup>Ibid., fols. 54b-56a; cf. Ibn al-ʿAwwām, fol. 155a.

into huge piles 'baīdars' with a circular path around each one where the threshing oxen would tread.<sup>1</sup> Ibn Waḥshīyya adds that the cultivators of the Qissīn district would spread the harvested crops around during the hours of night and collect them in the morning in order to protect them from the fierce sunlight and thus prevent them from becoming completely dry.<sup>2</sup>

i) Threshing and Winnowing. Oxen, cows, buffaloes and asses were used for the process of threshing.<sup>3</sup> The teams were yoked together and moved continuously around the circular path which surrounded the baīdar. The supervisor of the threshing would order fresh piles to be spread on the path when he was sure that the first had been properly threshed. Ibn Waḥshīyya adds, moreover, that the best time for winnowing was when the Shamāl wind blew.<sup>4</sup> Winnowers, he said, should work in pairs. In the southern parts of Iraq, where temperature is high, winnowing seems to have taken place during the night.<sup>5</sup>

<sup>1</sup>Ibid.

<sup>2</sup>Ibid. (MS. V L) 2483, fol. 55b.

<sup>3</sup>Jāhiz, al-dalā'il wa'l i'tibār, p.28; Tanūkhī, op.cit., Vol. VIII, p.66; Ibn Waḥshīyya, in the last paragraph of Kitāb al-filāḥa (MS. B L. Hunt 326), fol.190a, says that a "special text was prepared by him which dealt with oxen, cows, etc."

"اما سياسة البقر . . وغيرها من الدواب المقيمة لنا على الفلاحة . . . فقد

افردنا له كتابا جعلناه تابيا لهذا الكتاب"  
Dr. A. Susa, in his recent study, al-Rayy wa'l Haḍarā, p.49, proves by archaeological study that buffalo were used in the Baḡa'ah from about 4,500 years ago. He also suggests that those which were imported from India during the reign of Hajjaj were for breeding purposes.

<sup>4</sup>Ibid. (MS V L.3485), fol. 54a.

<sup>5</sup>Ibid.

j) Storing. Produce was usually kept in storage after it had been divided among the involved parties.<sup>1</sup> Sources speak of the best places for this purpose. Whether these places were temporary or permanent was probably dependent on climatic conditions. Instructions were also given on the preparation of such stores and in what condition they should be maintained.<sup>2</sup>

### AGRICULTURAL CALENDAR

The book of Natabean agriculture contains instructions to cultivators and agents of the landlords concerning calendar procedure.<sup>3</sup> The author states, moreover, that the owner of a farm should keep a diary of the work day by day. In it, the author said, should be instructions for daily duties and the use of such a book was essential for the correct organisation of a farm.<sup>4</sup> After that, Ibn Waḥshīyya discussed thoroughly the agricultural activities and practices of his and earlier periods in a chapter entitled Bāb dhikr al-'awqāt al-muwāfiqa li ḡurūb al-'a'māl<sup>5</sup>.

---

<sup>1</sup>The collective share of the produce of the treasury was stored temporarily in the village until its final collection, and before its transfer to the Kharāj Storehouses. Landowners and peasants had to store their share adequately. Abū Yūsuf refers to this matter and defends the peasants against any responsibility, should the government share become less. Kharāj, p.62.

<sup>2</sup>Two types of storage were used in the Sāwād; the room-shaped store in the case when the produce remained to be dealt with, while huge holes were dug in the ground when produce was to be stored for a long period. A thick layer of straw then covered the produce, and a layer of mud was added. An additional thin layer of mud might be required at the end of the next summer, but by this method the grain would keep for a considerable length of time. This practice is in current use, and is most effective. Ibid., fol. 23a; cf. Ibn



In his discussion he refers to varieties of farm activities as a necessary part of seasonal changes and gives a detailed description of weather conditions and the commencing date of each season. He distinguishes between the duration of each season according to its situation in Iraq. The lower part of Iraq which he designates "bilād Jukhī wa ahl al-maṣabb" he compares with its upper part, Iqlīm Bābil". A reconstruction of his comparison appears as follows:<sup>1</sup>

<u>Southern Iraq</u>		<u>Northern Iraq</u>	
<u>From</u>	<u>To</u>	<u>From</u>	<u>To</u>
Spring 10th February	-- 22nd May	21st March	-- 21st June
Summer 23rd May	-- 22nd August	22nd June	-- 21st September
Autumn 23rd August	-- 30th November	22nd September	-- 21st December
Winter 1st December	-- 9th February	22nd December	-- 20th March

It is doubtful, however, whether these limitations reflect the complete picture of the weather conditions throughout Iraq. It does,

---

<sup>3</sup>Ibn Waḥshīyya, op.cit. (MS. V L) fol. 23, under the title "Bab fī amr al-wukalā".

<sup>4</sup>Ibid., fol. 24b.

<sup>5</sup>Ibid., fol. 25a.

---

<sup>1</sup>al-ʿAwwām, op.cit., fol.155a.

however, localise dates for the individual crops and assists farmers in dealing with trees and orchards.

The information given in the following pages is taken from Ibn Waḥshīyya's statement and follows a similar arrangement to: that given in his book, presenting the changes in agricultural operations in terms of basic activities associated with the calendar months:<sup>1</sup>

## MAY ('Āīyār)

### Winter cropping

- a) harvesting barley
- b) harvesting wheat and linseed in the later part of the month
- c) harvesting chick-peas and lentils
- d) harvesting flax

### Summer cropping

- a) preparation of land for planting rice and millet
- b) planting rice, millet and the early sowing of sesame
- c) late planting cotton
- d) weeding of cotton
- e) gathering the melons, cucumbers, peas, beans, broad-beans and okra.

### Trees

- a) bedding nursery plants
- b) grafting grape-vines
- c) hoeing around trees
- d) manuring orchards

---

<sup>1</sup> Ibid., fols. 25b-29b.

It is interesting to compare the present agricultural calendar with those of the ancient period and of the third century.

The ancient calendar can be constructed from Sumerian and Akkadian sources, cf. Landsbarger, B., "Jahreszeiten im Sumerisch - Akkadischen", Journal of Near Eastern Studies (1949), VIII, pp.248-297.

The principal difference appears to be that sowing, according to the ancient calendar, was spread over periods of four months instead of three, and began in September rather than in October.

Considerable attention was given, during the late Spring and Summer months, to preparatory treatment of moist land which had recently recovered from floods. In most other features, however, the calendar appears to be similar.

JUNE (Hazīrān)Winter Cropping

- a) harvesting of late crops of wheat and linseed
- b) carting other winter cereals
- c) threshing and winnowing barley and the first growth of wheat
- d) the end of harvesting. Chick-peas and lentils

Summer cropping

- a) preparation of land and planting the late crop of rice
- b) sowing the sesame
- c) weeding cotton
- d) sowing Indian peas (mash)

Trees

- a) hoeing around grape-vines during the first half of the month and repeating the process during the latter half
- b) weeding the land around grape-vines
- c) gathering fig production
- d) planting asparagus and marsh-mallow
- e) spraying water on the trees in hotter districts, such as Ubulla and 'abdasi'.

JULY (Tammūz)Winter cropping

- a) threshing barley and wheat
- b) ploughing and harrowing the fields after harvesting winter cereals
- c) cleaning the ploughed land

Summer cropping

- a) picking cotton
- b) gathering garlic
- c) planting rice
- d) picking the strawberries ('ullāiq) from the areas
- e) planting broad-beans (baqillā')

Trees

- a) gathering the first grapes
- b) collecting figs, apples and pears
- c) collecting the first produce from palm-trees

AUGUST ('āb)Winter cropping

- a) threshing and winnowing wheat and barley
- b) hoeing

Summer cropping

- a) picking cotton
- b) gathering pomegranates
- c) cultivating cabbages, spinach and lettuces

Trees

- a) gathering ripe grapes
- b) hoeing around grape-vines (in Hulwān area)
- c) spraying trees in order to preserve them from dust and pests

SEPTEMBER (Aylūl)Winter cropping

- a) threshing and winnowing wheat and barley
- b) sowing lentils, chick-peas
- c) preparing land by ploughing and harrowing thoroughly

Summer cropping

- a) picking cotton
- b) harvesting millet
- c) harvesting sesame
- d) preparing dry straw for packing, storing and transportation of fruit; especially in the areas of Takrīt, Burkwārā, Yarma and Sarfāna in the centre of Iraq.

Trees

- a) final gathering of grapes

OCTOBER (Tishrīn 'awwal)Winter cropping

- a) preparing land by irrigation, ploughing and cross-ploughing for winter crops
- b) preparing the land for winter vegetables

- c) sowing for the early crops of wheat and barley, commencing at the second half of the month and continuing to the end of February

#### Summer cropping

- a) late threshing of winter cereals
- b) picking cotton
- c) harvesting and threshing rice
- d) sowing alfalfa (the Birsīm or Riṭāb)
- e) planting flax and poppy
- f) sowing broad-beans

#### Trees

- a) a) pruning and trimming various kinds of trees
- b) b) bedding nursery plants

### NOVEMBER (Tishrīn al-'Akhīr)

#### Winter Cropping

- a) continuation of preparation for wheat and barley and linseed
- b) sowing the middle crop of barley, wheat and linseed

#### Summer cropping

- a) picking cotton
- b) final harvesting of late-planted rice
- c) threshing sesame
- d) garnering turnips, beetroot, cabbages, cauliflowers and lettuces

#### Trees

- a) planting young grape-vines in the warm spots of lower Iraq
- b) hoeing
- c) continued trimming of many kinds of trees

### DECEMBER (Kānūn 'awwal)

#### Winter cropping

- a) last sowing of barley
- b) sowing of wheat, linseed and lentils

Summer cropping

- a) late picking of cotton
- b) uprooting of cotton plants
- c) burning the old roots for compost
- d) ploughing and harrowing fields for fallowing

Trees

- a) manuring grape-vines and various other trees
- b) planting the chestnut during the second half of the month
- c) collecting the produce of olive and quince trees

JANUARY (Kānūn al-'Akhīr)Winter cropping

- a) late sowing of wheat
- b) cropping of winter vegetables

Summer cropping

- a) sowing vegetables for early summer crops
- b) preparing and ploughing the land for cotton plants

Trees

- a) hoeing and manuring
- b) pruning certain trees such as apple, pear, etc. and grafting the pruned shoots
- c) grafting almond, apricot and apple trees
- d) budding trees of fruits and roses
- e) planting seedlings of figs, pears, plums, pomegranates and apples
- f) trimming trees and palm-trees

FEBRUARY (Shbat)Winter cropping

- a) irrigation of winter crops
- b) tending aubergine and cucumber seedlings
- c) cropping winter vegetables

Summer cropping

- a) preparation of land for summer vegetables and cotton
- b) eliminating weeds

Trees

- a) hoeing around trees
- b) manuring budded and grafted trees
- c) eliminating weeds

MARCH ('Adhār)Winter cropping

- a) irrigation of winter crops
- b) transplanting aubergines and cucumber

Summer cropping

- a) planting for the early growth of cotton during the second half of the month
- b) sowing summer vegetables
- c) planting rice

Trees

- a) hoeing and manuring
- b) eliminating and destroying weeds and other harmful plants

APRIL (Nīsan)Winter cropping

- a) last irrigation of winter cereals and linseed
- b) harvesting the early crops, especially barley (harfī)

Summer cropping

- a) preparation of land for cotton and vegetables
- b) sowing vegetables
- c) sowing sorghum
- d) planting cotton

Trees

- a) hoeing and manuring ground around fig, apple and pear trees
- b) propping heavily fruited branches with wooden supports
- c) eliminating weeds

### Methods of Cultivation

Different methods of cultivation were practised in Iraq which reflect the advanced level of agronomy during the period under consideration. Various procedures were adopted for cultivating the varieties of produce classed as cereals, in particular wheat and barley. For these important items, two methods of cultivation were used. In ordinary ploughed fields where irrigation depended on rainfall (duiūm)<sup>1</sup> or watering, and those known as hiyaḡ when the fields were divided into basins in addition to the small canals upon which the area chiefly depended for its irrigation.<sup>2</sup>

For the cultivation of rice, different methods were practised. Ibn Waḡshīyya speaks of two ways of sowing the seed; one was to mix them together with an equal amount of earth and water, and to form small balls from the mixture.<sup>3</sup> These, he said, should be put into holes of one dhirā' in depth and covered with earth. After regular and extensive watering, several plants would commence to grow from each hole. Cultivators should then transplant them, after separating the plants in each ball.<sup>4</sup> This transplantation usually took place by the edge of the Baṭiḡa and in the low lands

---

<sup>1</sup> Azdī, Ta'rikh al-Maūsīl (MS.), vol. II, pp. 238-9; Nuwairī, Nihāya, vol. VIII, pp. 255-6.

<sup>2</sup> Ibn Waḡshīyya, Filāḡa (MS. B L.), vol. III, fols. 97a-98b; 109a, 113b. cf. Ibn al-Awwam, op.cit. (MS. B M), fol. 127a.

<sup>3</sup> Ibn Waḡshīyya, op.cit., fol. 97a.

<sup>4</sup> Ibid.



of the middle and south of the Sawād.<sup>1</sup> Another method was to plough the field and then divide it into basins which would be filled with water. The seed was then scattered lightly on the surface of the water. When the water became absorbed the seeds were covered lightly with earth. After a few hours it was to be irrigated continuously.<sup>2</sup> The irrigation water, he said, must be changed every seven days until the time of harvesting.<sup>3</sup>

With the exception of such extensive irrigation, the procedure for millet cultivation was similar to that of rice.<sup>4</sup>

There were, for instance, four ways of cultivating broad beans. One way was to sow two seeds in each of the holes prepared over the field; another was to use the mud-ball method, each ball containing 4-5 seeds, or sowing the seeds in basins of water on the edge of irrigation canals and covering them lightly with earth.<sup>5</sup> Greens and vegetables which depended either on water tables or falls (ba'1) could not be cultivated without sufficient irrigation water saqīan.

Falls of temperature, especially during winter nights, necessitated shelter for nursling plants; some vegetables needed

<sup>1</sup>Muqaddasi, op.cit., pp. 53, 119; Yāqūt, op.cit., vol. II, p.10, vol. IV, p.217; Tanukhī, Faraj, vol. I, p.55.

<sup>2</sup>Ibn Waḥshiyya, op.cit., fol. 97b.

"حتى اذا مضت ساعات وتندى التراب الذى غطي به فليقام الماء في تلك المشارات  
قياما دائما متصلا."

<sup>3</sup>Ibid., fol. 98a.

<sup>4</sup>Ibid., fol. 109a.

<sup>5</sup>Ibid., fol. 115a.

shelter akhsās, while others needed transfer to places other than the first sowing beds, although this was not necessary for every kind of vegetable.<sup>1</sup>

The sources speak of a highly developed standard of knowledge in this respect.

Date palms were cultivated either from stones, off-shoots 'fasīlah', or nursling plants which usually sprang from the lower part of the tree in vast numbers.<sup>2</sup> By the first method, six or seven years were needed before the tree was fully productive, whereas by the second method it would take three to four years to fructify.<sup>3</sup> Naturally this was the more popular method of palm-tree cultivation. The proper season to transplant the nurslings was stipulated as being from between March to the end of June. Inoculation of the palm was to be undertaken by specially skilled cultivators.<sup>4</sup>

Horticultural techniques were also well-advanced. Fruit trees were grown either from seed or from shoots, lopped or trimmed from the parent tree. Lopping was the popular way to increase the number of each kind of tree.<sup>5</sup>

<sup>1</sup> Ibn Waḥshiyya, op.cit., fols. 28b-29b.

<sup>2</sup> Ibid. (MS. V L), fol. 211b. Cf. Dūrī, Iqtisādī, pp. 49-50; Dabbagh, al-Nakhīl wa'l tumūr fi'l 'Iraq (Baghdad 1956), p.15.

<sup>3</sup> Ibn Waḥshiyya, op.cit., fols. 211b-212a; Dabbagh, op.cit., pp. 16-17.

<sup>4</sup> Ibn Waḥshiyya, op.cit., fols. 193a, 224a. cf. Dūrī, p.50, no. 1; Dāhirī, al-Tanmiya al-Zira'iyya fi'l mujtama'at al-taqlīdiyya (Bīrut 1968), p.254.

<sup>5</sup> Ibid., fols. 183a-188a.

If the ground-space were sufficient near to the vine, then layering 'targīd' was practised to increase their numbers.<sup>1</sup> Grafting and budding were commonly used in fruit and rose trees either to accelerate the production or to introduce new varieties. Many complicated and fully comprehensive instructions are found in the sources concerning tree-growing and horticultural establishment.<sup>2</sup> These include advice on suitable areas and types of soil for various kinds of produce; planning irrigation channels; distances allowed between plants; fertilising, trimming and crop collecting in addition to diseases and their cure. Grafting, budding, the kind of tree which needed such action and the measures taken to ensure their success as well as the safety of the trees concerned, are all fully described.<sup>3</sup>

Then, as now, manure played an important part in agricultural life. The book of Nabatean agriculture devoted an entire chapter to it - "fī 'l zubūl wa anwā'ihā wa manfa'atihā wa tadbīrihā wa wajhi isti'mālihā".<sup>4</sup> The chapter deals with its preparation and effect. Ibn Waḥshīyya stressed the importance of manure to agriculture in general.<sup>4</sup> Jāḥiḡ declared that no kinds of vegetables or greens do well without its use.<sup>5</sup> Ibn Waḥshīyya

---

<sup>1</sup>Ibid., fols. 126b-130b.

<sup>2</sup>Ibid., fols. 138a-160a.

<sup>3</sup>Ibid., fols. 183a-188b.

<sup>4</sup>Ibid., fols. 42b-48a.

<sup>5</sup>Ibid., fol. 43a.

speaks of two kinds in common use by the cultivators of 'Iqlīm Bābil'. They were the natural and the composite, and the first was considered by him to be the better.<sup>1</sup> There were three types of this:

- a) Dove dung; animal droppings and human excrement;
- b) Straw, dry stems and leaves from almost all kinds of cultivation;
- c) Ash and cinders derived from burnt straw and any kind of vegetation.

Composite manure was a mixture containing several kinds of natural manure in addition to similar quantities of earth with added water, and left until it decomposed and putrified. It should then be spread to dry before it was used to fertilise the soil.<sup>2</sup> Ibn Waḥshīyya spoke of the correct kind of manure for each plantation. He describes a method which was to put the manure near to the tree roots, and to irrigate the deposit after covering it with earth. Another method, used in the case of vegetables, manure was spread over the irrigating canals near to the plants. He enumerates the plants which do not need manure and those to which it was even harmful or dangerous.<sup>3</sup>

The sources speak of special local trade in manure.<sup>4</sup> Ibn Waḥshīyya, on two separate occasions, refers to hampers of manure:

---

<sup>1</sup>Supra, p. 108, fn 4.

<sup>2</sup>Ibid., Cf. Ibn al-ʿAwwām, op.cit., f. l. 25b.

<sup>3</sup>والاشجار التي لا تحتاج الى تزييل . . . والتي يضرها الزبل . . . والتي يهلكها الزبل . . .

Ibn Waḥshīyya, op.cit., fol. 33a.

<sup>4</sup>Jāhiz, Dalāʾil, p.25. f. Dūrī, p.49.

sold to the cultivators.<sup>1</sup> This is confirmed by the other sources, especially during later periods.<sup>2</sup>

### Implements

Neither is detailed information concerning implements which were used for agricultural purposes or for farming activities forgotten. Būzjānī, as already stated, provides ample information on this point.<sup>3</sup> Except, however, definitions taken from Arabic dictionaries and the occasional references found in other sources;<sup>4</sup> the fullest are those given by Ibn Waḥshīyya in the book of Nabatean Agriculture.<sup>5</sup> He wrote a complete chapter under the title "mā Yahtāj 'ilāhi al-fallāḥīn" (on the basic needs of the peasants). It includes the various implements used for the day to day work in the fields.<sup>6</sup> Except for the introduction of a few modern techniques, the methods in use to date are similar to those used by Iraqi cultivators during the various periods of medieval history. They may, perhaps, be described as primitive, but they were ample to meet the needs of cultivators over many centuries. Ploughing was by means of the simple plough mīhrāth and this was made in three types: sikkah, dissul and tammūn. The first was the coulter,

---

<sup>1</sup> Ibn Waḥshīyya, op.cit., fol. 33b.

<sup>2</sup> Ibn Bassām, Nihāyat al-rutba fi ṭalab al-husba (Baghdad, 1968), pp. 79, 167; Yaqūt, Mu'jam al-udabā', vol. V, p. 306.

<sup>3</sup> Būzjānī, Kitāb al-Hawī lil 'amal as-Sulṭāniyya wa rusūm al-ḥisāb al-dīwāniyya (Ms. Bibl. Nat. arabe no. 2426); Cl. Cahen, 'Le Service de l'Irrigation en Iraq au début du XI<sup>e</sup> Siècle', BEQ (1949-51), XIII, pp. 117ff.

<sup>4</sup> For example, Ibn Sīda, Mukhaṣṣaṣ, vol. VIII, pp. 91, 98, 117-8, 120, 141-143, 177, 182.

<sup>5</sup> Ibn Waḥshīyya, op.cit. (MS. V L), fols. 28a-29b.

<sup>6</sup> Ibid.; Jāḥiẓ, Dalā'il, p. 28; Rasā'il ikhwān al-Ṣafā', vol. I, p. 217,

made of iron; the second was entirely of wood while the third was a wooden frame covered with leather and was attached to the ox, cow or horse which pulled it. The size of the sikkah varied according to the ploughing needed.<sup>1</sup> For the first ploughing of fallow land where the soil needed to be turned deeply, and a deep furrow was necessary, a sharp long coulter known as al-sikak al-withāq al-tawīla was used. When cultivators wanted to prepare long trenches across a field, a large, wide coulter known as al-sikak al-ʿirāq al-kabīra was the correct implement. The sikak al-retāila was the most effective instrument for closely cut furrows.<sup>2</sup> Besides these implements which served the purposes of ploughing, there was the mijrad which would be used to level the land after ploughing.<sup>3</sup>

Peasants worked in the fields using mattocks (miqāqs), harrows (mijrafs), spades (kurak), shovels (mishāt), hoes (miʿzaqah) and hatchets (faʿs) to level and smooth the land, and dig holes or trenches for guiding or directing irrigation water; wooden harrows (majārīf khashabiyya) were also used for several purposes, such as separating cereals from straws or in preparing artificial manure.<sup>4</sup>

---

cf. Dūrī, Iqtisadi, p.49.

<sup>1</sup>Ibn al-ʿAwwām, op.cit., fols. 16a, 121b-121a.

<sup>2</sup>Ibid., fol. 121 b.

<sup>3</sup>Ibid., fol. 170a.

<sup>4</sup>Ibn Wahshiyya, op.cit., fols. 43b-44a.

For the purposes of harvesting, reaping and destruction of harmful plants and weeds, either wide sickles (minjal) or scythes (mihash) were used.<sup>1</sup> Stone rollers and wooden mallets levelled the threshing place and smoothed its surface, while simple wooden winnowing forks were used for winnowing.<sup>2</sup> The sources ignore the implements for threshing. It is therefore presumable that the same methods were as at the present time, i.e. by yoking the animals together and using them to tread the grain.

Specialist cultivators of horticulture used several different implements in the course of their work. There were three types of knives; a sharp, medium sized one which was used for trimming; a short sharp one suitable for grafting and budding, while the third was semi-circular, especially shaped to cut palm leaves and branches.<sup>3</sup> Special sharp-edged iron pipes were used to cut incisions for budding and to prepare similar incisions in the tree on which budding was to take place.<sup>4</sup> Wax, clay-mud and rags were also used for the purposes of budding and grafting.<sup>5</sup> Rope and props helped to straighten the growth of plants or to support trees during the fruit-bearing season.<sup>6</sup> There were other useful

<sup>1</sup>Ibid., fol. 29b.

<sup>2</sup>Ibid., fols. 55b-56a.

<sup>3</sup>Ibid., fols. 138a, 183a-188a; Ibn al-<sup>6</sup>Awwām, op.cit., fols. 82a, 93b.

<sup>4</sup>Ibn al-<sup>6</sup>Awwām, op.cit., fol. 95b.

<sup>5</sup>Ibid., Ibn Wahshīyya, op.cit., fols. 183a-188a.

<sup>6</sup> " . . الحبال والدعائم تعدل بها المعوجة وتسند الحاملة " .

Ibid., fol. 37b.

accessories such as adzes, baskets, straw mats and brooms.<sup>1</sup>

Finally, oxen, cows, buffalo, horses and sometimes camels had their place in farming activities.<sup>2</sup> They operated water-wheels and other water-raising devices.<sup>3</sup> Two animals were used to pull the plough where ground was hard, while one was sufficient for wheat fields or easy land.<sup>4</sup> Oxen were usually employed at threshing time and to operate the mills. They were indispensable to the peasants.<sup>5</sup>

In his recent study of ancient irrigation in Iraq, Sūsa affirms that buffalo were numerous and widespread in early times. He, however, rejects the idea that Hajjāj imported buffalo from India during the Umayyad period and suggests that such a report may refer to the introduction of a stronger strain of cattle for breeding purposes.<sup>6</sup>

#### Pests and their extermination

The sources seem to have ignored the problem of pests. No reference to wild and harmful animals, insects or disease is made in

---

<sup>1</sup> Ibn Waḥshiyya, op.cit., fol. 57a; Ibn al-ʿAwwām, op.cit., fols. 155a-b.

<sup>2</sup> Jāhiz, Dalāʾil, p.28; Ibn Waḥshiyya, op.cit. (MS. B L, no. Hunt 326), vol. V, fol. 190a; Būzjānī, Hawī, fols. 164a-165b; cf. Cahen, 'Le Service...', BEO, vol. XIII (1949-51), pp. 118-9.

<sup>3</sup> Būzjānī, loc. cit.

<sup>4</sup> Ibn al-ʿAwwām, op.cit., fol. 17a.

<sup>5</sup> Dimashqī, Ishāra, p.38. He says

" فلا مندوحة للفلاح من البقر "

<sup>6</sup> Sūsa, al-Rayy wa'l ḥadāra, p.49.



most of the contemporary sources. Ibn Waḥshīyya, however, refers casually to vermin (al-hawām) and mentions only snakes, vipers and scorpions in the same manner.<sup>1</sup> Ibn al-ʿAwwām, who quotes from several contemporary books, some of which have disappeared, gives more detail. In addition to those spoken of by Ibn Waḥshīyya, he mentions wild rabbits, rats, foxes, jackals and wild boars.<sup>2</sup> In al-Mukhaṣṣaṣ, Ibn Sīda (d. 458 A.H./1065 A.D.) adds weasels, hedgehogs, jerboas, ichneumon, mastigures and hyenas to the number. Insects such as mosquitos, flies, ants and spiders are mentioned and one hundred and fifty different kinds of well-known birds are enumerated.<sup>3</sup> Locusts are the only pest commonly mentioned by the sources and they are mentioned specifically when swarms of them attacked produce.<sup>4</sup> Climatic conditions either deter or assist the destruction caused by them.<sup>5</sup> In the years, when rainfall was high, the swarms found their food in the desert plantations where they were hatched. When the season of cultivated growth commenced early, they did comparatively little damage, but when growth was late the picture was different. The next hatching of flying locusts will cross cultivated fields and greedy

---

<sup>1</sup> Ibn Waḥshīyya, op.cit. (MS. V L), fol. 23b.

<sup>2</sup> Ibn al-ʿAwwām, op.cit., fols. 155b-157a.

<sup>3</sup> Ibn Sīda, Mukhaṣṣaṣ, vol. VIII, pp. 91, 98, 117-8, 120, 141-3, 177, 182.

<sup>4</sup> Ibn al-Athīr, op.cit., vol. VIII, pp. 106, 393-4; Ibn al-ʿIbrī, op.cit., pp. 165, 167, 183.

<sup>5</sup> Sūlī, Akhbār al-Rādi..., p. 237; Brook, H., Notes on Locusts in Iraq, pp. 15-17; cf. Tanūkhī, Nishwār, vol. II, p. 86.

swarms will descend on the crops. The greatest danger is when both a shortage in rainfall and late growth combine.<sup>1</sup> Ibn Waḥshīyya suggests either fumigation of the orchards during an attack by locusts or the destruction of their eggs during the hatching period.<sup>2</sup> Unfortunately, the sources provide no evidence as to whether these suggestions were effectively used.

Under the title 'bāb miḥnat al-hinṭa wa'l-sh. 'īr', Ibn Waḥshīyya wrote a chapter discussing the diseases which attacked wheat and barley.<sup>3</sup> He suggested ways in which to examine these crops in order to discover whether or not they were perfect. He refers to certain changes in the natural condition of wheat and barley which caused a bad smell, and changed both the colour and the taste. Ibn Waḥshīyya does not name the disease, but indicates clearly that cultivators faced such pests.<sup>4</sup> There is no evidence, however, that his suggestions of remedy for this and other diseases which attacked other crops, such as cotton or trees, were effective or even whether they were practised.

---

<sup>1</sup>Ibn al-ʿIbrī, op.cit., p.185; ʿArib, op.cit., p.41. Cf. Dūrī, Iqtisādī, p.50.

<sup>2</sup>He refers to that in 'bāb maʿrifat al-ʿilla fī'l fasād al-ʿarīḍ li'l naʿat..', Filaha (MS. V L), fols. 36b-37b.

<sup>3</sup>Ibid., fol. 56b.

<sup>4</sup>Ibid.

### Crops and their distribution

Research into Jurist precepts is rewarded by much information concerning crops and their distribution in Iraq.<sup>1</sup> Other sources also reveal the methods of taxation and administration adopted after the period of Arab occupation. Added to these sources are the records of the varieties of corn grown there. Geographers and travellers while recording their experiences in that country, frequently mention the native produce. All the sources, including historical writings, poetry, literature, culinary arts and medicine, perhaps unwittingly, add to the knowledge of the abundant produce of the country.

There were various methods adopted for the classification of the crops and several lists are extant in which they are listed according to the purpose of their preparation and value in the life of the community. For example, earlier sources speak of certain taxable kinds of crops such as wheat, barley, grapes, dates, alfalfa, cotton, sugar and sesame.<sup>2</sup> From this can be deduced their importance to the economic life of that time.

No concrete evidence or accurate information is available concerning which part of Iraq specialised in, or was concerned with any particular product, nor the average quantity of each item produced. The list referred to above ignores other important Iraqi produce, such as rice, which formed a major part of the country's food. From this it would appear that each of these sources was

---

<sup>1</sup>For example see Abū Yūsuf, op.cit., p.30.

<sup>2</sup>Yahyā, op.cit., pp. 78-9; Abū Yūsuf, op.cit., p.40.

chiefly concerned with the produce which affected their native cities. These are mentioned under headings which listed various products calculated on a similar price scale, and perhaps this classification of agricultural produce served the ultimate purpose of tax assessment and collection.

Būzjānī, in his Kitāb al-hawī li'l a'māl al-Sultāniya wa rusūm al-hisāb al-dīwāniyah, which dates from the second quarter of the 11th century A.D., furnished valuable information in a section entitled 'fī ajnās al-hubūb wa taṣnīfiḥā'<sup>1</sup> (on kinds of cereals and their classification). According to him, different types of grain and of some other agricultural and horticultural produce were categorised by fiscal authorities under four basic headings according to their values.<sup>2</sup> This was done in order to facilitate the assessment of these commodities.<sup>3</sup> These four classes were sesame, wheat, barley and junkundum, and each included a list of various species similar in value.<sup>4</sup> The

---

<sup>1</sup> Cl. Cahen, 'Quelques Problèmes économiques et fiscaux de l'Iraq Buyide d'après un traité de mathématiques', Annales IEO, X (1952), pp. 326-363; idem, 'Document relatifs à quelques techniques Iraquiennes au début du onzième Siècle', Ars Islamica, XV-XVI (1951), p.24; cf. Ehrenkreutz, 'The Taṣrif and Taṣ'ir Calculations in Mediaeval Mesopotamian fiscal operations', JESHO, VII (1964), pp. 46-56.

<sup>2</sup> "ان الفرار من تجنيس اصناف الحبوب ردها الى صنف واحد ليتمكن اعتبار الكيل والحزر والتقدير والعبر وذلك ان الاصناف اذا كثرت لم يمكن ذلك فيها ."

Hawī (MS. Bib.Nat.), fol. 172; cf. Cahen, 'Quelques Problèmes économiques...', Annales IEO, pp. 336-7, also, 'Contribution à l'étude des impôts dans l'Egypte Médiévale', JESHO, V (1952), p.268.

<sup>3</sup> Būzjānī states that " . . لان اسعار الغلات بنواحي السواد مساوية لما جنسوها ومقاربا له على الاكثر "

cf. Ehrenkreutz, 'The Taṣrif and Taṣ'ir', JESHO, VII (1964), p.50, no.4.

sesame category included cumin, mustard, coriander, caraway, poppy and lucerne seed. The species classed with wheat consisted of chick-peas, haricot beans, lentils, linseed, garden cress, fenugreek, safflower, raisins, sumac, shelled almonds, shelled hazel-nuts, hemp-seed; while those classified with barley were whole rice, varieties of millet and oats.<sup>1</sup>

Moreover, Būzjānī refers to another category of species produced in the Sawād, the prices of which differed from the standard value of the other four. The most important of those, in the district of Sawād, were unshelled nuts, almonds, pistachios, chestnuts, jujubes and hazelnuts; dry pears and stoneless peaches.<sup>2</sup>

It is presumable that this method, as explained by Būzjānī, followed that used in an earlier century, and was perhaps even practised in the 1st century A.H.<sup>3</sup> Changes in the detail were probably the outcome of change in quality and quantity, and the demand would also probably affect the price. The seeds of lucerne were probably more valued during that century, which perhaps explains why it was given prominence as a heading. Grapes were

<sup>4</sup>Būzjānī, op.cit., fols. 172a-173a. cf. Cahen, 'Quelques Problèmes économiques', Annales IEO, X (1952), p.337; Ehrenkreutz, 'The Taṣrīf and Taṣ'īr', JESHO, VII (1964), p.49.

<sup>1</sup>Būzjānī, op.cit., fols. 173a-b. cf. Ehrenkreutz, op.cit., p.50.

<sup>2</sup>Abū Yūsuf, op.cit., p.30. Būzjānī says: "وهاهنا صنف آخر لا يقع عليها التصريف، وأكثرها يكون في الشهبوط والنبق والبندق المقشر والكمثرى اليابس والخوخ المقدد وغير ذلك لا يدخل فيها تصرف من الحبوب"

Hāwī, fol. 173b.

<sup>3</sup>Abū Yūsuf, op.cit., pp. 100-2; Yahyā, op.cit., p.10. cf. al-Wathā'iq al-Siyasiyya, p.255.

highly valued as is shown by their importance among the headings. This may offer an acceptable reason why many other products, such as rice, were not given the same status by earlier sources.<sup>1</sup>

The Jurists, on the other hand, distinguish between perishable and durable products and list them accordingly.<sup>2</sup>

Other Arabic sources give a picture of agriculture in Iraq during the 3rd century and trace the variety of its produce. Not only from geography and administrative history, but also other sources, supply much detail. One of these is the agrotechnical tract Kitāb al-Filāḥa al-nabaṭiyya of Ibn Waḥshīyya, who died in 291 A.H., who was, himself, a contemporary of the period under consideration.<sup>3</sup> Another source is Kitāb al-nabāt of Abū Ḥanīfa al-Dīnawarī, by whom a large amount of information concerning the agricultural production of the Arab lands is given, including references to those who produced in Iraq.<sup>4</sup>

There is yet more to be traced from the Kitāb al-filāḥa (the Book of Cultivation) of Abū Zakariyya Yaḥyā ibn Muḥammad ibn Aḥmad ibn al-ʿAwwān, who drew his information from al-Rāzī, Iṣḥāq ibn Sulaimān, Abū Ḥanīfa al-Dīnawarī, amongst several other authors. He provides much relevant information concerning the

---

<sup>1</sup> Yaḥyā, op.cit., pp. 78-9.

<sup>2</sup> Qudāma, Kharāj (MS.KL), fol. 88b.

<sup>3</sup> Supra, p. 86, fns. 2, 3.

<sup>4</sup> Dīnawarī, Kitāb al-nabāt (the book of plants), Uppsala (1953-), ed. B. Lewin.

methods employed for cultivation of crops, the technical skill involved and the implements used. He gives specific information concerning production in Iraq and quotes the various sources from which it is taken.<sup>1</sup> During this period the crops of Iraq seem to have been classified under the following headings:

- i) Grain and cereals
- ii) Provender
- iii) Fibres for textiles
- iv) Herbs
- v) Fruits
- vi) Vegetables
- vii) Floral products
- viii) Timber

Another factor re-occurring throughout the writings of all the sources is the effect of the seasons. There is a sharp

---

<sup>1</sup> Ibn al-'Awwām states that he largely depended on Kitāb al-Filāḥa al-nabatiyya (op.cit., fols. 1b-2a).

" قال مؤلف هذا الكتاب نقلت الى هذا الكتاب ما اشبه عندي انه  
يوافق الجزء العربي من الاندلس .. فان اقليم بابل في الاقليم الرابع "

Sometimes the author is directly referred to, while at others indirect references are made. e.g., he says :

fol. 25b " اما صاحب الفلاحة النبطية فيذكر ————  
fol. 120b " ومن الفلاحة النبطية في ذلك قال .....  
fol. 123b " قال ابن وحشية "  
and fol. 155a " جرت العادة في اقليم بابل "

He frequently uses the figure T (ط) of which he says in his introduction that it will abbreviate kitāb al-filāḥa of Ibn Wahshīyya.

demarcation between the products of the winter season and those produced in the summer. The extreme contrasts of the seasons provide the real basis of classification, and it is irrelevant in which month of the year plantation or seeding commences, as far as growing the produce is concerned, although Ibn Waḥshīyya gives the exact date of commencement and climatic conditions of each of the four seasons.<sup>1</sup>

The aim of the following pages is to survey the most effective products of Iraq.

Wheat and barley were cultivated wherever there were water supplies and wherever agriculture had been preserved. With the exception of the Baṭīḥa area and a few other places in the north east, they were widely cultivated all over the province. The Kharāj Tax of the Sawād, as shown by Qudāma and Ibn Khurraḍādhbeh was paid chiefly in wheat and barley. Moreover, according to these authors, each of the districts of the Sawād provided the treasury with a certain quantity of both these kinds of grain which indicates that both were cultivated in every district of the Sawād.<sup>2</sup>

---

<sup>1</sup>Ibn Waḥshīyya, op.cit., fol. 25 a.

" و اوقات فصول السنة التي تسبب التغيرات الموجبة لسلا عمل . . . "

In addition to this classification which is based on the divisions of the vegetable kingdom and its various families, Ibn Waḥshīyya refers to yet another classification dependent upon the seasons, of which only two were classified as "growing" seasons. He gives the exact dates and extent of the four seasons both in northern and southern Iraq.

<sup>2</sup>Qudāma, Nubadh, pp. 236-7; Ibn Khurraḍādhbeh, op.cit., pp. 8-14.



Ṭabarī describes the four districts lying both to the east and to the west of Baghdād, as extensively productive areas and gives it as one of the reasons why the Caliph Maṣṣūr chose it in which to establish his capital.<sup>1</sup>

The importance of these four districts which produced large quantities of wheat and barley during the 3rd century, when its production was considered by government as a reserve to solve the continual crises of price inflation.<sup>2</sup> Both ibn Ḥawqal and Iṣṭakhri described the area between Baghdād in the north, Kūfa in the south, the Tigris in the east and the Euphrates in the west, as being most extensively cultivated, and that it was difficult to distinguish between the separate plantations.<sup>3</sup>

The lands irrigated by the Nahrawān canal were considered by ibn Ḥawqal as large scale production areas.<sup>4</sup> The same description he applied to the Sawād of Sāmarrā.<sup>5</sup> Ya'qūbī also refers to the seven day'as of Sāmarrā as one of the most extensive areas of production.<sup>6</sup> The Wasiṭ area is also described by ibn Ḥawqal as an

---

<sup>1</sup>Ṭabarī, Ta'rikh, III, p.275; Ibn al-Athīr, op.cit., vol. V, p.264. Cf. Muqaddasi, Ahsan, pp. 119-120; Tanukhi, Nishwar, vol. VIII, pp. 16-18; also Ṣabī, op.cit., p.76.

<sup>2</sup>Ṭabarī, Ta'rikh, III, pp. 1660-1.

<sup>3</sup>Ibn Ḥawqal, op.cit., pp. 163, 166, 169; Iṣṭakhri, op.cit., p.85.

<sup>4</sup>Ibn Ḥawqal, op.cit., p.167.

<sup>5</sup>Ibid., p.156.

<sup>6</sup>Ya'qūbī, Buldan, p.264.

important barley growing area.<sup>1</sup> Both Qudāma and ibn Khurradādhbeh furnished interesting details concerning the quantity of wheat and barley collected annually from each district in the province of the Sawād during this century<sup>2</sup> and such details greatly assist the estimation of their total production in the country, especially as the official percentage or share taken is very clear.<sup>3</sup>

Some difficulties, however, may be encountered from apparent discrepancies in the material. The figures given by both Qudāma and ibn Khurradādhbeh may have been merely copies of official estimates and not an actual record of the amount collected. There is a strong probability that there are large differences between the figure of such official 'ibra and the actual amount collected. Moreover, the boundaries of the districts of the Sawād, as already stated, cannot be determined, although their general location is fairly clear in most cases. Thus no comparison can be drawn between them as to their respective agricultural yields. According to Qudāma's list, which depends mainly on the 'ibra of the year 204 A.H./819 A.D., the largest quantity of wheat was produced in the districts of Kaskar and Anbār. By the end of

---

<sup>1</sup>Ibn Hawqal says: "و نواحي واسط عمل مفرد من اعمال العراق بمامل جليل نبيه و خطير"

Masālik, p.162.

<sup>2</sup>Supra, p. 121, fn 2.

<sup>3</sup>Tabarī, Ta'rikh, III, p.1039.

the 3rd century the production of wheat in both these districts had dropped more sharply than the average decline in production of the entire province.<sup>1</sup>

Barley production was more extensive than wheat, perhaps because it is better able to resist the effect of the rising percentage of salt.<sup>2</sup> By consultation, computing and comparing the crops, it can be said that the average barley production in most districts of the Sawād was generally higher than that of wheat. There is no general decline in the production of barley, and although the amounts in five districts actually declined, there were seven districts in which the production flourished, while the other 28 districts retained their same average (see App. I).

The total estimated yearly tax in kind (share-production) of the Sawād at the beginning of the 3rd century A.H. according to Qudāma, was 177,200 kurr of wheat and 99,722 kurr of barley.<sup>3</sup> In the last quarter of the same century, according to ibn Khurradādhbeh,

---

<sup>1</sup>The total yearly production of the Kaskar and Anbar districts can be calculated as 75,000 and 29,000 Kurr bil mu'addal respectively during the early part of the 3rd century A.H. These figures made an average decline of 90% during the last quarter of the century, probably because of the devastation of the area due to revolts and economic instability. Supra, p.121, fn 2.

<sup>2</sup>Ibn Wahshiyya, op.cit., fol. 33b.

<sup>3</sup>Qudāma, Nubadh, p.239.

it was 69,650 kurr of wheat and 112,150 kurr of barley.<sup>1</sup> An amount calculated from the figures given in the Kitāb al-Wuzarā' of Ṣābī, which represents the yield at the beginning of the 4th/10th century, shows that the yearly levy of barley from the Sawād appears equivalent to 136,000 kurr.<sup>2</sup>

Ibn Waḥshīyya speaks of the distinction between six different varieties of wheat, distinguishable by size and weight. He provides practical examples for ascertaining the perfection of both wheat and barley.<sup>3</sup>

Bread, made from the flour of both these kinds of grain, was the major source of the Iraqi population's nutriment. Ibn Waḥshīyya states that it was popular among the inhabitants of the major cities of Iraq, such as madīnat al-Salām (Baghdād), Wasiṭ, Baṣra and Kūfa. Special dishes of bread pieces prepared with either vegetable soup or olive oil and vinegar, called al-tharīd, was a popular dish. Many kinds of dishes were prepared from boiled and peeled wheat, such as the burghul, habbiya and disheesh, which were similar to rice dishes but with different flavours. Some special dishes contained a paste of mashed meat

---

<sup>1</sup> Ibn Khurraḍādhboh, op.cit., pp. 8-14.

<sup>2</sup> The historical remains of Hilāl al-Ṣābī, ed. H.F. Amedroz, Leyden (1904), p.188. The actual amount mentioned by Ṣābī is in fact 340,000 kurr muṣarrafaṇ bi'l-faliḥ. This amount is converted to the kurr mu'addal on the ratio of 2:5. cf. Ehrenkreutz, 'The taṣrīf and taṣ'ir..', JESHO, VII (1964), pp. 46-56; idem, 'The Kurr system in Mediaval Iraq', JESHO, V (1962), pp. 309ff.

<sup>3</sup> Ibn Waḥshīyya, op.cit., fol. 31b, quoted by ibn al-'Awwām, op.cit., fols. 122a-b.

and pearl wheat.<sup>1</sup> Bread made from barley, frequently with an admixture of millet or beans, was the basic food of the majority of peasants (akirra). Ibn Waḥshīyya describes such bread as a proper meal for the ploughmen and cultivators whose work was strenuous.<sup>2</sup>

Special drinks were prepared from a mixture of barley and millet which were similar to strong wines in their effect.<sup>3</sup>

Rice, according to Arab geographers, was evidently grown in the regions of the S<sub>a</sub>wād where it was warm and humid, a condition necessary to its cultivation.<sup>4</sup> Both Qudāma and ibn Khurraḍādhbeh counted four districts in their lists of taxes which produced large quantities of rice, and were irrigated by the Euphrates and its lower canals, such as al-Ṣarāt al-Kabīra, Sūra al-Asfal and Budāt. Qudāma refers to these four districts as paying a combined tax on barley and rice. The Tassūj of Sūra and Barbisma paid 2,500 kurr, Furāt Badaqlā 2,500 kurr, Nistar 2,000 and Kaskar 20,000,<sup>5</sup> while Ibn Khurraḍādhbeh leaves similar information concerning the location of rice-growing area. With

---

<sup>1</sup>Ibn Waḥshīyya, op.cit., fol. 64b.

<sup>2</sup>Ibid., fols. 80a-b.

<sup>3</sup>Ibid., fol. 86a.

<sup>4</sup>Muqaddasī, op.cit., p.113.

<sup>5</sup>Supra, p.121, fn 2, p.123, fn 2.

the exception of the first mentioned district, which seems to reflect a yearly decline of 250 kurr, those of the remaining three appear to remain static.<sup>1</sup>

Apart from those already mentioned, Qāḍī Tanūkhī produces the first clear evidence concerning the total amount of rice assessed from three districts. He speaks of the cultivation of rice in low level fields in the Baṭā'ih.<sup>2</sup> Other areas to the east and south of Kūfa, which were irrigated by the lower canals of the Euphrates river, such as the Ṣarāt al-Kabīra canal, Sūrā al-Asfal and their sub-canals, in addition to the Budāt.<sup>3</sup> Yearly rice production in the diyā's of this area alone appear to have been 3,000 kurr mu'addal,<sup>4</sup> during the period between 243-263 A.H. (857/877 A.D.).<sup>5</sup>

Another passage by Qāḍī Tanūkhī refers to the rice-plantations of Jāmida in the locality north of the Baṭā'ih, south of Wasiṭ, and to the west of the river Tigris.<sup>6</sup> This region seems

<sup>1</sup>Ibid.

<sup>2</sup>Tanūkhī, Nishwār, vol. VIII, p.67; also Muqaddasī, op.cit., p.119.

<sup>3</sup>Tanūkhī, loc.cit.

<sup>4</sup>Cf. Ehrenkreutz, 'The Kurr System...', p.309 ff.

<sup>5</sup>Yaḡut, op.cit., vol. II, p.23.

<sup>6</sup>Tanūkhī, Nishwār, vol. VIII, p.92; Faraj, vol. I, p.55; Muqaddasī, op.cit., pp. 53, 119; Yaḡut, op.cit., vol. II, p.10, vol. IV, p.217. Cf. Canard, 'Le riz dans le Proche Orient aux Premiers Siècles de l'Islam', Arabica, VI (1959), pp. 113-131.

to have been one of the richest rice-producing area in Iraq. Because of this, it was coveted by the high-ranking officials who disputed its possession and endeavoured to control Jāmida and its neighbourhood during this period.<sup>1</sup> Ibn Waḥshīyya provides significant detail about the cultivation of rice in the Sawād (iqīm Bābil). The crops could be produced twice yearly in both the summer and winter seasons. The growth during the summer entirely depended on the possibilities of irrigation, while in winter, rainfall supported it. He gives the time for planting rice for summer growth as the second half of July (Tammūz), to be gathered during December (Kānūn al-'awwal). The rice for winter growth was to be planted at the beginning of January (Kānūn al-Akḥīr) and gathered during May-June (Aīyār-Huzairān).<sup>2</sup> Its planting demanded meticulous preparation, fertilisation, irrigation, harvesting and threshing.<sup>3</sup> In southern Iraq, particularly in the Bata'ih region and Baṣra, the rice, cooked with fish, constituted most - or at least - an important part - of the diet, and rice-bread played a large part in the nourishment.<sup>4</sup> This was the case for

---

<sup>1</sup>For example, see Tabarī, Ta'rikh, III, p.1535; Tanūkhī, Faraj, I, p.91. Sūlī, Akhbār al-Raḍī, pp. 233, 236, 239, 240.

<sup>2</sup>Ibn Waḥshīyya, op.cit., fols. 63a-64b, quoted by Ibn al-'Awwām, op.cit., fol. 127a.

<sup>3</sup>Ibid. . . . : . " شهيء متعب جدا "

<sup>4</sup>Istakhri, op.cit., p.212; Ibn Ḥanqal, op.cit., p.272; Muqaddasī, op.cit., p.345; Hudūd al-'Ālam, pp. 134, 137. Cf. Canard, 'Le riz..', p.121, n. 2.

the population living in the south and middle parts of the Sawad.<sup>1</sup> Dishes made from rice were often served with vegetables. Special recipes consisted of rice cooked with milk. It could also be cooked with butter, oil or fat, seasoned with salt.<sup>2</sup> A special kind of pastry could be prepared with rice, and in the districts 'abdasī, Bādarāyā, Bākasāyā, Junhulā and many others, a special kind of drink, nabīdh, is made from it which seems to have an intoxicating quality. This, ibn Waḥshīyya describes as "yudhhibu 'l 'aql", and it seems to have a similar effect as potions containing excessive alcohol.<sup>3</sup> Canard, however, points out that rice-made bread is chiefly the food of the poor because both that and bread made from barley are cheaper than that made from wheat, and considers rice-bread to be of less importance to the community than wheaten bread.<sup>4</sup> Nevertheless, in certain regions, rice was the basic food and, in Iraq, it remains as a staple dish, especially when accompanied by fish.<sup>5</sup> Some rice dishes require a great deal of complicated preparation.<sup>6</sup> The suitable climate of southern Iraq, the nature of the land, its

---

<sup>1</sup>Ibn Qutaiba, 'Uyūn al-akhbār, I, p.221. cf. Canard, 'Le riz...', pp. 121-2.

<sup>2</sup>Ibn al-'Awwām, op.cit., 127 ff. See Ibn al-Baīṭār, Mufradat, Bulāq (1291), vol. I, p.24.

<sup>3</sup>Ibn Waḥshīyya, op.cit., fol. 109a.

<sup>4</sup>Canard, op.cit., p.123.

<sup>5</sup>Jahīz, al-Bukhalā', p.282; Taj, p.27; Muqaddasī, op.cit., p.416.

<sup>6</sup>Kitāb al-ṭabīkh, pp. 24, 28, 33-34.



quantity of valuable and necessary water, no less than the great demand for this commodity, has led to the cultivation of rice on a large scale. Large supplies are the reason for its low price, thus enabling the poorer population of this area to look upon it as their major source of nutriment.

Sorghum dhura was produced in Iraq in large quantities. Ibn Wahshīyya provides information about the manure and irrigation methods used to ensure the crops.<sup>1</sup> He also refers to it as summer season produce and states that the seed was sown between 24th March and 24th April.<sup>2</sup> He states that the inhabitants of Southern Iraq considered that bread made from dhura was preferable to that made from rice, especially when mixed with the flour of wheat and barley.<sup>3</sup> Young dhura plants fed the cattle, and the sprouts, stubble and husk also fed them. This, he claims, was the proper fodder for cattle, especially cows and goats.<sup>4</sup>

Oats, rye and millet were well known products of the Sāwād. Ibn Khurradādhbih states that millet and barley together were used in the Rostiqbadh district as payment of taxes, which emphasises the importance of millet production in this part of the

<sup>1</sup>Ibn Wahshīyya, op.cit., fols. 109a-112b, (VL) fol 64b.

<sup>2</sup>Ibid. (VL), fol. 64b.

<sup>3</sup>He states

Ibid. (BL), fol. 113a.

<sup>4</sup>Ibid. " وخبزه يوافق الاكرة واسحاب الكد في الصنائع المتعبة الشاقة "

country.<sup>1</sup> The author of Kitāb al-filāḥa al-nabaṭiyya refers to the areas nāḥiyat Saqī dijla, Asfal iqlīm Bābil, Joukhī and al-Jarāmiqa with their especially high yield of these fodder crops.<sup>2</sup>

Alfalfa and clover were also known, but their importance seems to be less than it was in the preceding two centuries. It is noteworthy to recall here that both the barley and rutbah were used for land reclamation in addition to their normal use as feeding stuff for cattle.<sup>3</sup>

Cotton was the most common of textile plants. Muqaddasī describes the Sawād of Baṣra as one of the most important areas for producing the finest cotton crops in Iraq.<sup>4</sup> Ibn Waḥshīyya was of the opinion that a clay soil was the best kind for the growth of cotton, but that it must be completely free from salt.<sup>5</sup>

Cotton was sown between the end of April and the end of May. The gathering of the early crop began in June and continues until the end of July.<sup>6</sup> Flax (kattān) was also extensively grown in the Sawād, particularly near the middle region of Iraq, where its

<sup>1</sup>Ibn Khurraḍādhbeh, op.cit., pp. 8-14.

<sup>2</sup>Ibn Waḥshīyya, op.cit. (BL), fol. 113a-b.

<sup>3</sup>Ibid. fol. 93b.

<sup>4</sup>Muqaddasī, op.cit., pp. 118, 141.

<sup>5</sup>Ibn Waḥshīyya, op.cit. (BL), fols. 145b-146a.

<sup>6</sup>Ibid.

crops were used not only for textiles but the seeds formed a staple part of the food. The inhabitants used flax-seed flour in the preparation of bread. Lamp oil was also extracted from flax-seed.<sup>1</sup> A detailed description is provided by ibn Waḥshīyya of how the peel can be taken from the flax-stem in order to prepare the flax for textile use.<sup>2</sup>

Hemp (Arabic qinnab; Persian shahdānāj) was another well-known produce, and ibn Waḥshīyya distinguishes between the two kinds of hemp.<sup>3</sup> There was the kind that produced seed, which was cultivated; the other was not cultivated so much as a textile plant but rather for the production of a narcotic (Arabic hashīsh). The second kind which does not produce seeds was more widely used for textiles and was woven into a lasting and rough cloth. Hemp fibre was also useful with which to make various kinds of rope and threads.<sup>4</sup>

It was sown in Iraq between the 20th February and 24th March and was harvested in June.<sup>5</sup>

---

<sup>1</sup>Ibid., fol. 147 b.

<sup>2</sup>Ibid., fols. 148a-149b.

<sup>3</sup>Ibn Waḥshīyya, op.cit. (VL), fol. 71a; quoted by Ibn al-ʿAwwām, op.cit., fol. 133b.

<sup>4</sup>Ibid.

<sup>5</sup>Ibn al-ʿAwwām states: "يغزل ويحاك و تعمل منه ملابس خشنة ولا كنهها  
قوية و حبال رقاق و غلاظ و خيوط "

Filaha, fol. 133b.

The dye yielding plants cultivated in Iraq were:

madder (Arabic Fuwwah) which produced a red dye;

saffron (Arabic Za'farān) which produced a yellow-orange dye;

indigo (Arabic Nīla) which produced a blue dye;

lawsonia (Arabic hinnā') which produced a dark orange dye

and was used for cosmetics and

medicinal purposes.<sup>1</sup>

Ibn Waḥshīyya stated that the opium poppy either grew wild or was cultivated in Iraq. The cultivated poppy was known as 'Bustanī', and some of them were black and others white. In the northern part of Iraq another type of poppy was produced - 'jabalī' - which was much larger. A third type is also mentioned which grew entirely as a wild flower, 'Barrī'.<sup>2</sup>

Asparagus (Arabic, Hiliyon) was also cultivated and was, according to Ibn Waḥshīyya, originally brought from the Jordan valley, and was produced in Bājarmā, and Saqī Jūkḥā among other districts of Bābil and Khaṭarnīyya.<sup>3</sup>

Sesame was the most important of the oil producing plants and its oil (Arabic: dih al-Simsim) practically replaced that of the olive. Ibn Waḥshīyya advised that sesame should not be

<sup>1</sup>Ibn al-'Awwām quoted both Ibn Waḥshīyya and Abu Ḥanīfa al-Dīnawarī, Filāḥa, fols. 133b-134b.

<sup>2</sup>Ibn Waḥshīyya, op.cit. (BL), fols. 156b-159b.

<sup>3</sup>Ibid., fols. 162b-165a.

cultivated in successive years, as its cultivation weakened the soil when constantly repeated.<sup>1</sup> Muqaddasī later refers to the countryside of Takrīt as perfect for sesame cultivation.<sup>2</sup> Wāsiṭ is also mentioned by other authors as a centre of its production during the first quarter of the fourth century.<sup>3</sup>

Pulse plants, such as Indian peas (Arabic, māsh), lentils (Arabic, ʿadas), vetch (Arabic, karsana or julban), lupin (termis) were mentioned by the sources among many other similar products.<sup>4</sup>

A considerable number of plants with medicinal properties are mentioned in Arabic medical books. The Book of Poisons (Kitāb al-sumūn) of ibn Waḥshīyya describes various kinds of plants with such properties, which were either cultivated or grew wild in Iraq. Among them are:<sup>5</sup>

Lemon grass (Arabic, <u>adhkur</u> );	wild ginger (Arabic, <u>āsarūn</u> );
wormwood ( " <u>ifsantīn</u> );	aniseed ( " <u>ānisūn</u> );
camomile ( " <u>bābūnj</u> );	rocket ( " <u>jarjīr</u> );
cypress nut ( " <u>jūz al-Sarr</u> );	nutmeg ( " <u>jūz hind</u> );
lerebinth fruit ( " <u>ḥabba knadira</u> );	water mint ( " <u>al habaq al-nahri</u> );

<sup>1</sup>Ibid., fols. 150a-152b.

<sup>2</sup>Muqaddasī, op.cit., p.123.

<sup>3</sup>Ibn Miskawāh, op.cit., vol. I, p.294.

<sup>4</sup>Jāhiz, Dalaʿil, p.19; Ibn Waḥshīyya, op.cit. (BL), fols. 125a-128a; 136a.

<sup>5</sup>Ibn Waḥshīyya, Kitāb al-Sumūn, trans. Martin Levey, Philadelphia (1966), Transactions of the American Philosophical Society, vol. 56, part 7. (C. ET<sup>2</sup>, s.v.

white cress (Arabic, <u>harf</u> <u>abyadl</u> );	Babylonian (Arabic, <u>harf</u> <u>babily</u> );
harmal ( " <u>harmal</u> );	henna ( " <u>hinna'</u> );
colocynth ( " <u>handal</u> );	mallow ( " <u>khubbaz</u> );
Nabatean ( " <u>kharnub</u> <u>carob</u> );	castor ( " <u>khurwi'</u> ); oil plant
poppy ( " <u>khishkhash</u> );	black poppy ( " <u>khishkh</u> <u>aswad</u> );
wild black ( " <u>khishkhash</u> poppy <u>barri</u> );	Chinese ( " <u>darṣinī</u> ); cinnamon
long pepper ( " <u>dār fulful</u> );	ginger ( " <u>zanjabīl</u> );
and orgian (Arabic, <u>sa'tar</u> )	

are among those mentioned.<sup>1</sup>

There were many types of herb mentioned also:

mint (Arabic, <u>na'na'</u> );	caper plant (Arabic, <u>kubar</u> );
chicory ( " <u>hindiba'</u> );	clove ( " <u>qurunful</u> );
borage ( " <u>lisan</u> <u>al-thur</u> );	fennel ( " <u>shamra</u> );
fenugreek ( " <u>hilba</u> );	water cress ( " <u>rishshad</u> <u>al-ma</u> );
wild cress ( " <u>rishshad</u> <u>albarr</u> );	dill ( " <u>shibint</u> );
sage ( " <u>qis'in</u> );	parsley ( " <u>baqdūnis</u> );
leek ( " <u>kurrath</u> );	sorrel ( " <u>himmāḡ</u> );
sweet basil ( " <u>sa'tar</u> <u>hindi</u> );	turmeric ( " <u>kurkum</u> ). <sup>2</sup>

<sup>1</sup>Ibid., pp. 115-127.

<sup>2</sup>Ibn Waḥshīyya, Filaha (VL), fols. 105a-116b.

The sugar cane was cultivated in the Sawād of Baṣra and it flourished in the region of the Baṭā'ih.<sup>1</sup> According to Tha'ālibī, its cultivation was widespread in Iraq.<sup>2</sup>

From very early times, fruit growing played a large part in the country's economy. Whatsoever under Umayyad or early Abbasid rule, the date palm was prolific in all districts and was cultivated more intensively towards the south, particularly in the vicinity of Baṣra where it was of prior importance and was cultivated in immense quantity and variety. Detailed information is given by Arabic authors concerning the palms and their distribution. Ibn Ḥawqal and Iṣṭakhri stated that palm trees were extensively cultivated in the Sawād as far as Qadisīyya of Kūfa in the west and to the border of Iraq in the north.<sup>3</sup> Ibn Waḥshiyya provides detailed descriptions of the varieties, plantation, diseases and cure of the trees. He speaks of innumerable varieties of date and the advantages of both fruit and tree.<sup>4</sup> Ibn al-Faqīh quotes Jāḥiẓ as saying that, during the reign of the Caliph al-Ma'mūn, there were three hundred kinds in Baṣra.<sup>5</sup> Throughout the Sawād, dates were of almost equal

---

l-Rasā'il Ikhwān al-Ṣafa, vol. II, p.137.

<sup>2</sup>Tha'ālibī, Yatīma, vol. II, pp. 130-131.

<sup>3</sup>Ibn Ḥawqal, op.cit., p.240; Iṣṭakhri, op.cit., p.240.

<sup>4</sup>Ibn Waḥshiyya, Filaha (VL), fols. 192a-211b.

<sup>5</sup>Ibn al-Faqīh, Bulḍān, 253. cf. Dabbāgh in al-Nakhīl wa'l tumūr fī al-Iraq (Baghdad, 1956), pp. 100-101.

importance to the community as were wheat, barley and rice.<sup>1</sup>

In many areas, particularly in the Sawād of Baṣra, dates formed the chief part of the diet of most of the community and was the sole nourishment of some.<sup>2</sup> Despite Islamic prohibition, strong

intoxicants from dates were not only produced but were consumed; a very strong vinegar and other and refreshing drinks were also a product from them.<sup>3</sup> Fresh dates of a choice variety achieved

special celebrity, while the products of the least choice were used as fodder and, by cultivators, in the preparation of manure.

Ibn Waḥshiyya enumerates the usefulness of palm-trees and concludes by saying that every part of every tree had its function.<sup>4</sup> Apart from nutriment capacity, its timber was used for building houses, cottages and hovels; furniture was constructed from its fronds and uses of these were extended to boat and skiff building. The inner part of the wood contains an especially sweet sap, highly valued as a sweetmeat. Date molasses was immensely important in the trade relations of the country with the Arabian desert dwellers, no less than was the date fruit, apart from their value in the internal market.<sup>5</sup>

<sup>1</sup>Ibn Waḥshiyya, Filāḥa (BL), fols. 106b-174a.

<sup>2</sup>Jahshiyārī, Wuzarā', p.146; also ibid.

<sup>3</sup>Ibn Waḥshiyya, Filāḥa (BL), fol. 113a.

<sup>4</sup>Ibid.

<sup>5</sup>Nuwaḥrī, op.cit., vol. I, pp. 369-371; Tha'ālībī, Lata'if, p.132; Muqaddasī, op.cit., p.118.



Viticulture flourished, and early sources speak of the tax which was levied on vineyards shortly after the Arab occupation.<sup>1</sup> Ibn al-Faqīh refers to the varieties of vine and to the new kind brought into Iraq in order to increase the quantity and quality of production.<sup>2</sup> In a chapter 'On vines', Ibn Waḥshīyya provides detailed information concerning various aspects of their plantation and production.<sup>3</sup> He refers to the large varieties of vine which were under cultivation. Abū Ḥanīfa al-Dīnawarī, in his Kitāb al Nabāt refers to a favourite kind of grape, "zarjūn"<sup>4</sup>. He also mentions the early season grapes, the "ḥusrim" from which were developed various kinds of drinks.<sup>5</sup> He also refers to "The Virgin's fingers" (asabi' al-'adhārā) the iqmā'i , the raisin (zabīb) and the currant (kishmish) which were dried from the produce of special vines.<sup>6</sup> Different types of grapes are spoken of, by other sources, which were produced locally in many districts.<sup>7</sup>

---

<sup>1</sup> Māwardī, op.cit., p.168.

<sup>2</sup> Ibn al-Faqīh, op.cit., p.125.

<sup>3</sup> Ibn Waḥshīyya, op.cit., fols. 126a-160a.

<sup>4</sup> Dīnawarī, op.cit., p.230.

<sup>5</sup> Ibid., p.131.

<sup>6</sup> Ibid., pp. 44-5, 207.

<sup>7</sup> Muqaddasī, op.cit., pp. 122-3, 125; Ibn Ḥawqal, op.cit., p.230; Nuwairi, op.cit., vol. I, p.371; Tha'alibi, Lata'if, p.133.

Another well-known variety of fruit was the fig, for which the Hulwān district was reputed.<sup>1</sup> Abū Ḥanifā al-Dīnawarī distinguished between four kinds of the fruit, whether grown from the fig-palm of gardens and orchards (bustānī), wild (barri), in flat areas (sahlī), or of mountain growth (jabalī). He also refers to ten varieties of fig which differed in size, taste and colour.<sup>2</sup>

The pomegranate (rummān), oak (ballūt), chestnut (shāhballūt), hazel-nut (bunduq), pistachio nut (fistiḡ) and almond (luoz) appear in many sources as Iraqi produce during the 3rd century.<sup>3</sup>

Soft and stone-fruits no less occupied their position among the fruit produced in this country. Ibn Waḥshīyya, among others, names many of them:<sup>4</sup>

apricots	( <u>mishmish</u> );	peaches	( <u>khuokh</u> );	pears	( <u>ijās</u> );
prune	( <u>shahluj</u> );	damson	( <u>barquq</u> );	quince	( <u>sfarjal</u> );
apple	( <u>tuffah</u> );	pippin	( <u>tuffah jabalī</u> );	banana	( <u>muoz</u> );
mulberry	( <u>tūt</u> );	black mulberry	( <u>tūt-aḥmar</u> );	raspberry	( <u>'ullaiq</u> );
common bramble	( <u>tūt shawki</u> );	and the olives ( <u>zaitūn</u> )			

together with many others were cultivated in most parts of the Iraq

<sup>1</sup>Muqaddasī, *op.cit.*, p.123; Ibn Waḥshīyya, *Filāḥa* (VL), fol. 170b; Dinawarī, *Nabāt*, pp. 69-70.

<sup>2</sup>Dinawarī, *Nabāt*, pp. 70-71.

<sup>3</sup>*Ibid.*, p.200; Ibn Ḥawqal, *op.cit.*, pp. 220-1, 227, 230-1; Rasā'il Ikhwān al-ṣafā, vol. II, pp. 140-1; Tha'ālībī, *Laṭā'if*, p.133.

<sup>4</sup>Ibn Waḥshīyya, *Filāḥa* (VL), fols. 168a-169b; Jāḥiz, *Bukhalā'*, p.201; Dinawarī, *Nabāt*, pp. 41, 75.

countryside.<sup>1</sup>

Citrus fruit: the lemon (laimūn), orange (burtuqāl) and bitter orange (nāranj), seem not to have been cultivated during the 3rd century A.H. although citron (atrūnj) trees are mentioned. Professor Dūrī states that citrus trees were brought to Iraq for the first time from India during the 4th century. They came to Baṣra via 'Umān in the Persian gulf.<sup>2</sup> Both Ibn Waḥshiyya and Abū Ḥanīfa, al-Dīnawarī mention the citron and classified it into two groups: sweet (atrūnj ḥulū) and bitter (atrūnj ḥamūḍ).<sup>3</sup>

Melons (Arabic, baṭṭikh; Persian, kharrbūz) and water-melons (shammām) abounded everywhere and Ibn Waḥshiyya states that large quantities of them were cultivated in great variety during this time.<sup>4</sup> While he mentions eight different kinds, he says that it would be difficult to quote the names of all of them.<sup>5</sup> Melon and water-melon, however, seem to have been the most popular fruit in the markets.<sup>6</sup>

<sup>1</sup> Ibn Ḥawqal, op.cit., pp. 220-1; Muqaddasī, op.cit., p.141; Dīnawarī, Nabāt, pp. 202-3.

<sup>2</sup> Dūrī, Iqtisādī, p.58.

<sup>3</sup> Ibn Waḥshiyya, Filāḥa (BL), fol. 178a; Ibn al-'Awwām, op.cit., fols. 87a-89b; also Dīnawarī, Nabāt, pp.40-1.

<sup>4</sup> Ibn Waḥshiyya, Filāḥa (BL), fols. 122b-123b.

<sup>5</sup> Jāhiz, Da'ā'il, p.23; Dīnawarī, Nabāt, p.65, also Ibn Waḥshiyya, Filāḥa (BL), fols. 122b-125b.

<sup>6</sup> Ibn Miskawaih, op.cit., vol. III, p.51.

The rich soil of Iraq was favourable to vegetable-growing and was also highly developed for that purpose during the period under consideration. They were found growing near the large commercial centres such as Baghdād, Sāmarrā, Wasiṭ, Kūfa and Baṣra. Ibn Waḥshiyya details some of the vegetables and spices for which the country was noted during his time, and other contemporary sources supplement his information.<sup>1</sup> The most common were cabbages (Arabic, karnab), cauliflower (qinnābiṭ), turnips (saljam), radishes (fijil), carrots (jazar), onions (baṣal), garlic (thum), marrows (kusāt), cucumber (khiyār), snake cucumber (qith thā'), horseradish (fāṣṣaliyā'), broad beans (baqillā'), kidney beans (lūbiyā'), peas (baṣāliyā'), aubergines (badhinjān), leaf beet (silq), spinach (sabānikh) and lettuce (khasṣ).

Many different kinds of flowers were also a factor in the produce of Iraq and Ibn Waḥshiyya devotes a specific chapter giving details of their cultivation, particularly mentioning roses.<sup>2</sup>

Among the varieties he mentions are:<sup>3</sup>

Sweet basil (Arabic, <u>jūrī</u> );	broom (Arabic, <u>baḥār</u> )
jonquil ( " <u>nisrīn</u> )	jasmine ( " <u>yasamīn</u> )
myrtle ( " <u>aass</u> )	and marsh mallow ( " <u>khaṭmī</u> )

<sup>1</sup> Ibn Waḥshiyya, Filāḥa (BL), fols. 72b-74c, 75b-76c, 113b, 119b. See also: Jahiz, Bukhālā', p.241, Dalā'il, p.23; Rasā'il Ikhwan al-Safā', vol. II, p.138; Ibn al-Jawzi, Talbīs, p.221; Tha'alibi, Yatima, vol. II, p.140.

<sup>2</sup> Ibn Waḥshiyya, Filāḥa (BL), fols. 148a-149b.

" في زراعة الاحباق والرياحين "

<sup>3</sup> Ibid.

To these, other authors add the names of:

narcissus (Arabic, nari's), violets (Arabic gurunful),  
sweet sultan (Arabic, 'anbar) and crown imperial (Arabic,  
shaqa'iq).<sup>1</sup>

In the period under consideration it is doubtful whether flowering plants, other than those used medicinally, such as roses for the extraction of rose-oil (dihnl'ward) and rosewater (nā' al-ward), were grown if for the purpose of decoration or to have any major role in the production and economy.

Finally, thirty-five different kinds have been thoroughly discussed by Ibn Waḥshiyya in a chapter entitled "Unfruitful trees" (al-ashjār al-latī lā tuthmir) which were cultivated in order to produce timber, to provide shelter for plants or for visual enjoyment.<sup>2</sup> It is more reasonable to suppose that these trees were raised to meet local needs for buildings, manufacturing wooden implements for cultivators, water rising machines, fences, boats and many other articles which were basically wooden. It is equally reasonable to suppose that plantations provided the requirements of wood for fuel.

---

<sup>1</sup>Ya'qubī, Buldān, p.264; Nuwayrī, op.cit., p.371; Hikāyat Abu'l Qasim al-Baghdādī, p.89. cf. Duri, Iqtisādī, p.60.

<sup>2</sup>Ibn Waḥshiyya, Filāḥa, (VL), fols. 177a-183b.

### Appendix I

The following appendix shows the total revenue of each district during the early years of the 3rd century A.H., derived from the works of Qudāma ibn Ja'far, compared with the figures given by ibn Khurradādhbey. Each section comprises the revenue of one district.

The abbreviations used in this appendix are as follows:

A	Districts
B	The amount of wheat presented in kurr
C	The amount of barley presented in kurr
D	The amount of money presented in dirhams
Qu	Qudāma ibn Ja'far (represents the year 204)
Khur	Ibn Khurradādhbey (represents the last quarter of the century)
ϕ	that this figure is a combination of barley and rice
ϕϕ	that this figure is a combination of barley and millet
Ⓜ	the figures represent the year 260 A.H.

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
<u>Anbār</u>			
Qu.	11,800	6,400	400,000
Khur.	2,300	1,400	150,000
<u>Qutrabull</u>			
Qu.	2,000	1,000	300,000
Khur.	2,000	1,000	200,000
<u>Maskin</u>			
Qu.	3,000	1,000	150,000
Khur.	3,000	2,000	150,000
<u>Bādūrayā</u>			
Qu.	3,500	1,000	1,000,000
Khur.	3,500	2,000	2,000,000
<u>Buhurasir</u>			
Qu.	3,500	1,000	150,000
Khur.	1,900	1,700	150,000
<u>Rumagan</u>			
Qu.	3,300	3,300	250,000
Khur.	3,300	3,050	250,000
<u>Kūthā</u>			
Qu.	3,000	2,000	350,000
Khur.	3,000	2,000	150,000
<u>Nahr durgit</u>			
Qu.	2,000	2,000	200,000
Khur.	2,000	2,000	200,000
<u>Nahr jaubar</u>			
Qu.	1,500	6,000	150,000
Khur.	1,700	6,000	150,000
<u>Zawabī</u>			
Qu.	1,400	2,700	250,000
Khur.	1,400	2,700	250,000
<u>Bābil</u>			
Qu.	3,000	5,000	350,000
Khur.	3,000	5,000	350,000
<u>Upper Fallūja</u>			
Qu.	500	500	70,000
Khur.	500	500	70,000
<u>Lower Fallūja</u>			
Qu.	2,000	3,000	280,000
Khur.	2,000	3,000	280,000

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
<u>Nahraīn</u>			
Qu.	300	400	45,000
Khur.	300	400	45,000
<u>'Aīn al-tamr</u>			
Qu.	300	400	45,000
Khur.	300	400	45,000
<u>al-Jubbā wa'l Budāt</u>			
Qu.	1,500	1,600	150,000
Khur.	1,200	1,600	150,000
<u>Surā wa Barbisma</u>			
Qu.	1,500	4,500	250,000
Khur.	700	2,400 ø	100,000
<u>Barūsmā wa Nahr al-Malik</u>			
Qu.	3,500	4,000	122,000
Khur.	1,500	4,500	250,000
<u>Upper and Lower Burs</u>			
Qur.	500	5,500	150,000
Khur.	-	-	-
<u>al-Saiybāīn wa'l Wuqūf</u>			
Qur.	-	-	-
Khur.	500	5,500	150,000
<u>Furāt Bādaqlā</u>			
Qu.	2,000	2,500	52,000
Khur.	1,000	2,500	900,000
<u>Sailahīn</u>			
Qu.	1,000	1,500	140,000
Khur.	1,000	1,700	140,000
<u>Rudhmestān</u>			
Qu.	500	500	20,000
Khur.	500	500	10,000
<u>Nistar</u>			
Qu.	2,200	2,000	300,000
Khur.	1,250	2,000 ø	300,000
<u>'Ighār Yaqtīn</u>			
Qu.	1,200	2,000	204,800
Khur.	-	-	204,840



<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
<u>Kaskar</u>			
Qu.	30,000	20,000	270,000
Khur.	3,000	20,000 $\phi$	200,000
<u>Buzurjasābūr</u>			
Qu.	2,500	2,200	300,000
Khur.	2,500	2,100	300,000
<u>Radhanāin</u>			
Qu.	4,800	4,800	120,000
Khur.	4,800	4,800	120,000
<u>Nahr Būq</u>			
Qu.	200	1,000	100,000
Khur.	200	1,000	100,000
<u>Kulwādha wa Nahr bīn</u>			
Qu.	1,600	1,500	330,000
Khur.	1,600	1,500	330,000
<u>Jazar wa'l Madīna al-'atīqa</u>			
Qu.	1,000	1,500	240,000
Khur.	1,000	1,500	140,000
<u>Rustuqbādh</u>			
Qu.	1,000	1,400	246,000
Khur.	1,000	1,400 $\phi$	170,000
<u>Mahrūd̄h wa Silsil</u>			
Qu.	2,000	1,500	150,000
Khur.	1,000	2,500	250,000
<u>Jalawlā wa Jalultā</u>			
Qu.	1,000	1,000	100,000
Khur.	1,000	1,000	100,000
<u>Dhībāin</u>			
Qu.	1,900	1,300	40,000
Khur.	700	1,300	40,000
<u>Daskara wa'l Rustaqīn</u>			
Qu.	1,800	1,400	60,000
Khur.	2,000	2,000	70,000
<u>Barāz al-Rūz</u>			
Qu.	3,000	5,100	120,000
Khur.	3,000	5,000	120,000

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
<u>Bandanījin</u>			
Qu.	600	500	35,000
Khur.	600	500	100,000
<u>Upper Nawrawān</u>			
Qu.	1,700	1,800	350,000
Khur.	1,700	1,800	350,000
<u>Middle Nahrawān</u>			
Qu.	1,000	500	100,000
Khur.	1,000	500	100,000
<u>Lower Nahrawān</u>			
Qu.	1,700	1,300	53,000
Khur.	1,000	1,200	150,000
<u>Badarāya wa Bakasāyā</u>			
Qu.	4,700	5,000	330,000
Khur.	4,700	5,000	330,000
<u>Nahr al-Sila</u>			
Qu.	1,000	3,121	59,000
Khur.	-	-	-
<u>Shādh Faīrūz</u>			
Qu.	900	4,000	430,000
Khur.	-	-	1,800,000

# Chapter IV

## THE AGRICULTURAL POLICY OF THE STATE

The Abbasid authorities seem to have been fully aware of the connection between the prosperity of agriculture and the state revenue. Kharāj and other forms of land taxes were its greatest asset, and rulers realised that the more agriculture flourished, the greater the gain to the treasury.<sup>1</sup>

So much waste in expenditure and unnecessary salaries to too many officials, together with the loss of gold and silver mines in outside provinces of the state - most of which had been either depleted or annexed as a result of wars - that the treasury was scarcely able to meet necessary expenditure.<sup>2</sup>

The attention of the caliphs focussed upon agriculture in Iraq as a means of rectifying the position. At the same time they realised that to adopt the policy of giving much-needed assistance to the cultivators would be a wise policy. It is obvious, however, that the welfare of the cultivators did not always receive the consideration due.<sup>3</sup>

---

<sup>1</sup> Tanūkhī, Nishwār al-muḥādara, vol. VIII, p.89; cf. Dūrī, Tā'rikh al-'Iraq al-iqtisādī, pp. 38-47.

<sup>2</sup> Lewis, B., "Abbāsids", EI<sup>2</sup>, sv.

<sup>3</sup> Tanūkhī, Nishwār, vol. VIII, p.89; Miskawāh, op.cit., vol. I, p.27.

The Abbasid policy towards agriculture seems to have been directed into five main channels: Irrigation policy, cultivation, supervision, reforms in tax assessment and collection and the revenue calendar in addition to the policy of iqṭāʿ.

i) Irrigation policy

The Abbasid government gave much attention to the maintenance of irrigation systems.<sup>1</sup> New canals were dug, and specialists in irrigation problems were imported and employed.<sup>2</sup> Qudāma ibn Jaʿfar quotes the advice given by the vizier Muʿāwiya ibn Abdullāh, who included it in his Kitāb al-Kharāj to the Caliph Maḥdī. The vizier was of the opinion that all expenses of the maintenance of the system should be covered by the Treasury. This, he said, should include the expenses of dredging, waterways, establishing dams, and digging new canals in addition to the costs of maintaining weirs, dams and strengthening river dams, especially during the seasons of flood.<sup>3</sup>

It seems, however, that such advice was not always taken. The sources speak of Nahr al-Ṣila Canal which was dug in the area of Wāsiṭ during the reign of the Caliph Maḥdī. He did not charge the cost to the cultivators, but he doubled their rate of taxes over a period of fifty years, according to special terms he made

---

<sup>1</sup>Tabarī, Tāʾrīkh, III, 2159; Ṣābī, Wuzarāʿ, pp. 256-7.

<sup>2</sup>Jāziz, al-tabassur bil-tijāra, pp. 33-4.

<sup>3</sup>Qudāma, Kitāb al-Kharāj wa-ṣanʿat al-kitāba (MS. K.L), f.100b.

with them.<sup>1</sup>

In his Kitāb al-Kharāj, Abū Yūsuf also stresses the financial responsibility of the state to strengthen the banks of both the rivers Tigris and Euphrates. In this connection he also mentions repairs to banks caused by flood damage. He emphasises that these matters should not be the responsibility of cultivators, particularly those who worked the Kharāj lands. He further said that not only the two main rivers of Iraq, but the dredging of the main canals were partially the responsibility of the diwan al-Kharāj and that the expenses of the operation should be shared both by the treasury and the cultivators. He recommended that when sub-canals were the private property of certain cultivators, or when they ran through irrigated lands or orchards, then the entire cost of dredging was the responsibility of the land owners or cultivators.<sup>2</sup>

The cost of digging new canals was high and the only practical way of covering such expense seemed to be to pay the amount from the treasury. Jahshiyārī provides information concerning the dredging of the upper Qatul and digging an additional canal, during the reign of the Caliph Hārūn al-Rashīd. The cost, which amounted to 20 million dirhams, was met by the treasury.<sup>3</sup> Ṭabarī

---

<sup>1</sup>Qudāma, 'nubadh min Kitāb al-Kharāj, pp. 241-42.

<sup>2</sup>Abū Yūsuf, Kitāb al-Kharāj, p.63.

<sup>3</sup>Jahshiyārī, al-wuzarā' wa'l-Kuttāb, p.63.

provides another example when he speaks about the Caliph Mutawakkil and his new residence in al-Mutawakkiliyya,<sup>1</sup> to the north of the capital, Sāmarrā. He refers to a new and large canal which was dug in the year 245 A.H./859-60 A.D., in order to irrigate the fields surrounding this area. The expenses of creating this were, on this occasion, included in the total expenses of the area and were met by the treasury.<sup>2</sup>

This was not always the case, however. As has already been mentioned, the ruling factor was the mood of the particular caliph. Even the Caliph Mu'taḍid, who was known to devote much attention to the problem of irrigation and to follow an enlightened policy in this respect, ordered a stipulated sum to be collected from the owners of day'as and iqṭā's in order to help defray costs for the clearance of large stones in the Dujāil Canal which prevented the necessary drainage of water.<sup>3</sup> It is possible that this canal chiefly irrigated private property, which would give the reason for the charge. It is also equally possible that the financial difficulties which faced the Abbasid government during that period may have been the cause.

---

<sup>1</sup>It was known also as al-maḥḥūza.

<sup>2</sup>Tabarī, Tā'rikh, III, p.1438. Copied by ibn al-'Athīr, al-Kāmil, vol. VII, p.33.

<sup>3</sup>Ibid., III, p.2153.

The responsibility of the government for irrigation supervision, maintenance of water supplies, dams, etc., in addition to other functions, was carried by the dīwān al-Kharāj.<sup>1</sup> Specialised employees would be based in this dīwān and drafted when and where necessary. Land surveyors (massāḥūn) were always needed to plan and construct new canals and waterways; engineers (muhandisūn) who were concerned with the construction of weirs, dams, etc.; others specialised in the maintenance necessary to irrigation. There were those who would arbitrate concerning disputed land, advise on the use of additional canals where none were in existence; some would advise and supervise concerning dredging and draining of existing water-ways; to see that the banks of rivers and canals were kept in constant repair.<sup>2</sup>

All these things were the responsibility of the dīwān al-Kharāj. The duties of the various departments were collated under two headings, according to Būzjānī. They were designated as the Karī (or the 'imāra) and the Bizandāt (or the Tahsīn). Draining and dredging were the responsibility of the Karī. This was done during the period preceding cultivation. The Bizandāt held the responsibility

---

<sup>1</sup> Ṣabī, Wuzarā', pp. 256-7; Būzjānī, Kitāb al-hāwī lil a'māl as-Sultāniyya wa rusūm al-hisāb al-dīwāniyya, f.177a, ed. C. Cahen, 'Le Service de l'irrigation en Iraq au debut du XI<sup>e</sup> siècle, BEO, XIII, 1949-51, pp. 117-143.

<sup>2</sup> Jāhiz, Tabassur bi'l-tijārah, pp. 33-4; Būzjānī, op.cit., p.147a.

for the constant repair necessary to the banks of rivers and canals during the periods of flooding and also extended through the time of harvesting, during which time it was known as "The protector of the crops" (taḥsīn al-ghillāh).<sup>1</sup> Miskawāh stressed the clear relation between the 'imāra and the 'ibra.<sup>2</sup>

Special engineers were concerned with the problems of water supply (muhandisū al mā'). According to Jāḥiẓ the Caliph Mu'tasim brought in a similar type of engineer when he established the capital Sāmarra.<sup>3</sup>

The sources also speak of many types of workers which were employed by dīwān al-Kharāj. Būzjānī mentions supervisors of water levels (qaiyyāsūn) in the rivers, canals and sub-canals; those employed in creating new canals and other dredging works; labourers who dug them; others who carried displaced soil to strengthen outposts, dams or weirs, or to dispose of unnecessary rubble (naggālūn). There were reed assemblers for the purpose of building dams (razzamūn) fresh water carriers (sawwā'ūn) to those working on these and other types of work are also mentioned. Last, but by no means least, there was the controller who organised all types of work according

---

<sup>1</sup>Būzjānī, Kitāb al-hawī, f.149a. cf. Ibn Ḥawqal, Masālik, p.56.

<sup>2</sup>Miskawāh, op.cit., II, p.128.

<sup>3</sup>Jāḥiẓ, al-tabassur b'il-tijārah, p.34; Ya'qūbī, Buldan, p.264. The continuation of a similar class of engineers is noticeable during the reign of the Caliph Mu'tadid; see Šabī, Wuzarā', pp. 256-7.



to its nature. Such an army of workers was sent whenever necessary and all of them were paid by the diwān al-Kharāj. In those cases when the work was not the responsibility of the diwān al-Kharāj, the total of expenditure made was collected from those cultivators who gained the advantage from the operation.<sup>1</sup>

The responsibilities of the diwān al-Kharāj did not end there. It was their responsibility to resolve problems and disputes between cultivators concerning irrigation problems in order to ensure justice and the proper use of irrigation water. Representatives of the diwān, including high officials, engineers and other specialists were usually sent to the spot in order to investigate the case. After consultation with the local landowner and assessing the amount of irrigation water passing through the canal and the local custom<sup>2</sup> under consideration, the commission of representatives would give their views in a report to the appropriate department of the diwān which was responsible for its implementation, after it had received the vizier's approval. Sometimes the Caliph himself listened to the different arguments concerning the problem under dispute, if he considered the subject to be of sufficient importance, or when he was specially concerned with the cultivator's problems.<sup>3</sup>

---

<sup>1</sup>Tabarī, Ta'rikh, III, 2153; Qudāma, op.cit., f.100b.

<sup>2</sup>There was the usual custom of the enclosure (harīm), which was not only on the land boundaries, but also applied to rivers, cultivation, etc. etc. Abū Yūsuf, Kitāb al-kharāj, p. 57; Qudāma, al-kharāj, (MSS) fols. 99a-99b; cf. EI<sup>2</sup> s.v. "Filāḥa".

<sup>3</sup>Ṣabī, Wuzarā', pp. 256-7; cf. Dūrī, Ta'rikh al-'Irāq al-'iqtisādī fi'l qarn al-rabi' al-hurī, p.39.

Ṣabī provides an interesting light on how the Caliph Mu'taḍid closely supervised the distribution of the costs. In this same report Ṣabī shows how a commission sent to the spot to study a specific case which, on that occasion, received a just settlement which benefitted the cultivator.<sup>1</sup> The incident also reflects that it was possible for the government engineers to conspire with the owners of the day'ās in the district to defraud the cultivators preceding the arrival of the commission.

A summary of these records indicates that it was considered to be the responsibility of the dīwān al-Kharāj to construct and maintain dams and also to excavate and clean the main irrigation channels.<sup>2</sup> The sources provide details of several large-scale irrigation schemes and also the repair of several ancient dams in Iraq.<sup>3</sup>

#### ii) The Supervision of Cultivation

The sources claim that the official attitude towards the cultivators and other inhabitants of the Sawād should be to ensure justice and improve their conditions. Ibn Abī al-Ḥadīd, for example,

---

<sup>1</sup> Ibid.

<sup>2</sup> EI<sup>2</sup>, s.v. "Filāḥa"; Government of Iraq, the Directorate General of Antiquities of Iraq, Investigations in diwala region, p.80; Appendix No. XXV, pp. 45-48 a-b; The Functional Aspects of the Nahrawan System, pp. 84, 88-92; Adams, R.McG., Land behind Baghdad (1965), Chicago and London, p.98ff.

<sup>3</sup> Expenditure through majlis al-hawadith of dīwān al-nafaqāt represents a certain amount of money to cover damage and losses, perhaps because of flood and locust; see Qudama, al-Kharāj, fol. 8b.

quoted the advice of the Caliph Alī ibn Abī Ṭalīb to his ‘amils, which said that by improving the condition of the inhabitants of Kharāj land, the common standard of all would be improved, and stressed the need for consideration towards cultivators and care for the land.<sup>1</sup> Both Jahshiyārī and Ṭabarī quote the instructions of the Caliph Ḥarūn al-Rashīd to his ‘amils of the Kharāj, to be at all times just and helpful.<sup>2</sup> This can therefore, be considered to be the official policy of the state which, in theory, continued to the end of the third century.<sup>3</sup>

In practice, unfortunately, the matter was different and often far from being just or helpful. According to Qaḍī Tanūkhī, money was lent to the cultivators by the Abbasid government, to help them to buy seeds and cows for the purposes of cultivation.<sup>4</sup> In some cases, seeds were lent to the poorer cultivators;<sup>5</sup> but whether they were lent seeds, cows or money, what was lent was retrieved immediately after the produce was collected.<sup>6</sup> In times of urgent need or disaster the "majlis al-hawādith" in the section of expenditure (dīwān al-naḥāt) was responsible to alleviate immediate distress and spend any necessary money.<sup>7</sup>

<sup>1</sup> Ibn Abī al-Ḥadīd, Sharḥ nahj al-balāgha, Vol. XVII, p.70.

<sup>2</sup> Jahshiyārī, al-Wuzarā', p.233; Ṭabarī, Tā'rikh, III, p.748, cf. Dinawarī, Uyun al-Akhbar, vol. I p.13.

<sup>3</sup> Ṣabī quotes from an official letter circulated by the vizier 'Alī ibn 'Isa, on the eve of the fourth century A.H, to the ‘amils of the Kharāj to maintain Justice. Wuzarā', pp. 336-8; cf. Miskawāh, Vol. I, p.27.

<sup>4</sup> Tanūkhī, Nishwar al-muhādarah, vol. I, p.66.

<sup>5</sup> Ṣabī, op.cit., p.338.

<sup>6</sup> Ibid., p.338 ff. cf. Nuwairī, Nihayat al-arab, V-II, pp. 250-260.  
<sup>7</sup> Supra, p.155, fn.3.

Some unforeseen disasters were a great blow to agricultural production and even harder for the producers, and it is presumed that compensation methods sometimes were used to restore the damaged property. Khaṭīb al-Baghdādī, for example, has left information concerning compensation made during the reign of the Caliph Mu'taṣim. The amount distributed was as high as five million dirhams.<sup>1</sup> Sometimes a reduction in tax was made, wholly or partially, for long or limited periods. Such methods were frequently practised during the third century A.H. and benefitted some of the high ranking officials and leaders of the Turkish guards.<sup>2</sup> Various terms were used to identify the official tax reductions which were practised during the period of this study. The Iḥtimāl was a complete cancellation of tax over a certain period;<sup>3</sup> the Taswīgh, the Ḥaṭiṭa and the Tārīka were a variety of special reductions.<sup>4</sup>

In spite of the religious restrictions against change in the legal status of kharāj land, it would seem that some of it was actually transferred and was considered as 'ushrī. This represents

---

<sup>1</sup> Al-Khaṭīb al-Baghdādī, Tā'rīkh Baghdād, vol. IV, p.149; Ibn al-'Athīr, al-Kāmil, VI, p.215.

<sup>2</sup> Ṭabarī, Tā'rīkh, III, 1535; Ṭaīfūr, Baghdād, p.211; cf. Abū Yūsuf, op. cit., p.33; 'Iṣṭakhṛī, Masālik, p.142.

<sup>3</sup> Iṣfahānī, Kitāb al-'Aghānī, vol. V, p.419; Khawārizmī, Mafātīh al-'Ulūm, p.60; cf. Dozy, I, 300b-301a; C. Cahen, "Review of Lokkegaard's Islamic Taxation", Arabica, I (1954), pp. 346-353; C.E. Bosworth, "Abu 'Abdullāh al-Khawārizmī on the technical terms of the secretary's art", a contribution to the administrative history of medieval Islam, JESHO, Vol. XII, part II (1969), p.134.

<sup>4</sup> Qudāma, al-Kharāj, folc. 86b-87a.

special reduction of the tax, although without alteration in its legal status. Tabarī, however, says that in 245 A.H./855 A.D., the Caliph Mutawakkil transferred the whole of the cultivated land of Kūrat Shamsāt from kharāj to 'ushrī land. The Caliph provided the inhabitants with certificates of transference.<sup>1</sup> The effect of this action, though perhaps detrimental to the treasury, was undoubtedly of great assistance to the cultivators. In addition, the sources speak of direct interference in the kind and amounts of crops to be cultivated in each session in the kharāj lands to ensure that a sufficient and continuous payment would be made to the treasury regularly.<sup>2</sup>

The authorities investigated and arbitrated the disputes which arose between the cultivators over boundaries (al-hudūd) or concerning irrigation rights and the repair of banks or cleansing rivers and other water courses,<sup>3</sup> in addition to questions relating to metayage (muzāara'a) leases for orchard planting (musāqāt), reclamation of waste land ('ihya' al-mawat)<sup>4</sup> and the enclosure (harīm) of cultivation, wells and subterranean water courses (qanawāt).<sup>5</sup>

---

<sup>1</sup>Tabarī, Tā'rikh, III, 1428.

<sup>2</sup>Ṣabī, op.cit., p.216.

<sup>3</sup>Ṣulī, 'Adab al-Kuttāb, III, pp. 212-3; Ibn al-'Athīr, vol. VI, p.33.

<sup>4</sup>Yahya ibn 'Ādam, al-Kharāj, p.72, nos. 309-355; cf. Ban Shemesh, Taxation in Islam, vol. I; Yahya ben 'Ādam's Kitāb al Kharāj, Leiden (1958), pp. 71-77.

<sup>5</sup>Ibid., Abu Yūsuf, Kitāb al-Kharāj, p.57; Qudāma, Kharāj, MS, fols. 99a-101b.

All these disputes were dealt with by special committees appointed whenever necessary.<sup>1</sup>

Sometimes the Caliph himself would attend, investigate the cause of dispute and give his verdict; while at other times it would be given by a judge who theoretically represented the Caliph.

Endeavour was made to combine Islamic principles with local customs. The sources speak of a special administration whereby the Caliph and the court were in contact concerning most of the changes which occurred in the various provinces.<sup>2</sup> The *diwān al-Barīd*, in fact, was responsible to provide the central government with continual reports on the cultivation and the cultivator. *Ṭabarī*, for example, refers to regular daily letters from the heads of the branches of *diwān al-Barīd* in the provinces to the Caliph *Maṣṣūr* in the year 158 A.H. (774 A.D.).<sup>3</sup> In addition to various information, these letters contained an account of conditions in the countryside and the position of the cultivators. The caliph would cause an immediate enquiry to be made to the *ʿamil* if any unusual or unexpected changes occurred.<sup>4</sup> There is, however, no reason to suppose

---

<sup>1</sup> *Ṣulḥī*, *op.cit.*, III, pp. 212-3.

<sup>2</sup> *Qudāma* points out that the fixing of boundaries was one function of the *diwān al-Kharāj*. See *Kharāj* (MS) fol. 18a.

<sup>3</sup> *Ṭabarī*, *Tā'rikh*, III, p.435.

<sup>4</sup> *Ibid.*

that this form of administration was demolished during the third century. On the contrary, Qudāma produces an official copy of a document concerning the appointment of a head of a branch of *diwān al-Barīd* (*'ahd bi-tawliyat 'āmil Barīd*), which clearly indicates the continuance of this method.<sup>1</sup>

The Caliph also held a special council (*majlis al muzālim*) under his personal supervision which heard and rectified the complaints of those who felt they had been treated unjustly.<sup>2</sup>

As a rule Abbasid viziers heard the complaints in person. Ahmad ibn Abī Khālid practised this during his term of office under the Caliph Ma'mūn.<sup>3</sup> Mu'taḍid's vizier, Ubaid Allāh ibn Sulaimān was the head of the committee investigating the Mazālim case concerned with the dispute over division of water for irrigation in the Baduraya district.<sup>4</sup> Tanūkhī provides further examples which confirm that many similar cases of Mazālim were dealt with by this vezier.<sup>5</sup> Both Ṣabī and ibn Miskawayh refer to another occasion when a dispute arose between the cultivators of the Baduraya area and the tax collectors concerning the amount of *kharāj* to be collected. The head of the *diwān al-dar* supervised

---

<sup>1</sup> Qudāma, *al-Kharāj* (MS), fols. 16a-17a.

<sup>2</sup> Al-Khāṭib al-Baghdādī, *op.cit.*, vol. III, p.350; al-'Azdī, *Tā'rikh al-Mausil* (Photographic copy of manuscript), part II, p.201; al-Abshihī, *al-mustatraf min Kullī fannin mustatraf*, vol. I, p.240; also, Sulī, *op.cit.*, vol. III, pp. 212-3; Ṣabī, *op.cit.*, pp. 256-7; Ibn al-Athīr, *op.cit.*, vol. VI p.33.

<sup>3</sup> Ibn Taifūr (BM. MS. no. Add. 23318), fol. 888a.

<sup>4</sup> Ṣabī, *op.cit.*, pp. 256-7.

<sup>5</sup> Tanūkhī, *Faraj*, vol. I, pp. 106-7.

the investigation.<sup>1</sup> Ibn Miskawāh presents an order which was issued to all 'amils of the Abbasid state by the vezier Ali ibn 'Isa, early in the 4th century A.H. In it responsibility for decisions of disputes arising from agricultural problems, after thorough investigation of each case, was delegated to the 'amil concerned. He was instructed to implement his decision and if it were in favour of the complainant, and the matter under consideration related to kharāj or any other land taxes which - in the opinion of the 'amil should be reduced - he was authorised to deduct such a sum as he considered to be reasonable. The deduction, in such a case, was referred to as ihtisab min al-mazālim.<sup>2</sup>

All these references confirm that the Mazalin jurisdiction applied also to the problems which faced the cultivators during the era under consideration.

The authorities could influence price control and effectively stopped price inflation during any period of inflation or crisis.<sup>3</sup>

---

<sup>1</sup> Šabī, op.cit., p.359; ibn Miskawāh, op.cit., vol. I, p.31.

<sup>2</sup> Ibn Miskawāh, op.cit., vol. V, p.93. cf. E. Tyan, Histoire de l'Organisation Judiciaire en Pays d'Islam, Leiden, 1960; Amedruz, H., 'The Mazalim Jurisdiction in the 'Aḥkām Sulṭāniyya of Mawardī', JRAS, 1911, pp. 635 ff.

<sup>3</sup> The sources cite various factors which, together, produced inflation. Some were from natural causes, such as floods, shortage of irrigation water and falls, pests and disease. Others related to the instability of the political situation and military activities against revolts which disturbed trade routes and the safety of tradesmen; the actual amount of produce compared with the quantity needed for marketing, etc. The sources, however, indicate that inflations and price crises occurred frequently during the third century; in the years 206 A.H./821 A.D., 'Azdi; op.cit., II, p.307;





or disaster.<sup>1</sup> Sometimes even more extreme measures were taken.<sup>2</sup>

When the agricultural yields were good and the produce plentiful, prices of grain and foodstuffs fell below the average and another problem arose. During such periods cultivators and workers were alike affected, but there is no indication in the sources of any direct or indirect assistance being offered by the Abbasid government. On the contrary, the government seemed to consider only the effect on the treasury and were concerned only to ensure that its coffers should be full. No thought appears to have been given at these times to the distress of those who produced, and when low prices were anticipated the government seems to have been most keen not only to sell its stored crops before the season of the new, but also to sell its share of the coming harvest almost before it had been gathered, to avert anticipated loss.<sup>3</sup>

Dimashqī, in his Kitāb al-Ishāra, mentions a letter sent from the Caliph Ma'mūn to Ahmad ibn Yūsuf al-Kātib, the head of the dīwān al-Kharāj, in which he refers to an expected good harvest and an anticipated loss because of the low price situation

---

<sup>1</sup> Tabarī, Tā'rikh, vol. III, pp. 1.60-1; cf. Dūrī, Dirāsāt, p.203 ff.

<sup>2</sup> Such measures occurred towards the end of the third and the beginning of the fourth centuries A.H., when extreme inflation had been caused by the "ḡamān" undertaken by vizier Ḥamid ibn al-'Abbās; the ensuing situation forced the caliph to cancel the ḡamān and ease tension by opening both the governmental stores and those belonging to the vizier, offering the grain at a cheaper price; see Miskawāh, Tajārib, vol. I, pp. 72-75.

<sup>3</sup> Dimashqī, Kitāb al-'Ishāra 'ilā maḥāsin al-tijāra, p.48.

which would ensue. He ordered the chief of the dīwān al-Kharāj to circulate an order to all the 'amils to sell immediately.<sup>1</sup> Such an action would undoubtedly deal a great blow to the cultivators. Government storehouses held large stocks of most of the needs of the markets which would be flooded with the government's stocks and prices would drop sharply. Deflation on this scale crippled the bargaining power of the tradesmen and rendered them unable to buy other stock. The brunt of these conditions fell hardest upon the shoulders of the cultivators. It should also be remembered that, for several reasons, the retail tradesmen preferred to buy stocks from the government rather than from individual cultivators.<sup>2</sup>

Theoretically it was the government's responsibility to protect cultivators from any threat to their lives and property, but the Abbasid government achieved very little in this respect. The sources produce evidence that various kinds of practices were used by the cultivators to protect themselves from the unjust dealings of the greedy and unscrupulous tax-collectors.<sup>3</sup> They sometimes appealed to the caliph through majlis al-mazālim

---

<sup>1</sup>Ibid.

<sup>2</sup>Jahshiyārī, al-wuzarā' wal-Kuttāb, p.319; Dimashqī, op.cit., pp. 50-51, 60-61; Tāifur, Baghdad, p.22.

<sup>3</sup>The "'iljā'" was a practice used by cultivators. Khawārazmī, op.cit. p.60; cf. Cahen, EI<sup>2</sup>, s.v. 'Himāya'; "Notes pour l'histoire de la Himaya", Mélanges Louis Massignon, vol. I (1956), 257 ff., Løkkegaard, Islamic Taxation, p.67; Bosworth, Abu 'Abdullāh al-Khawarazmī on the technical terms of the Secretary's art", JESHO, vol. XII (1969), p.139.

or sought the protection of high-ranking personages, or even changed the tenure of the land to waqf. The bribing of 'amils was also well-known as 'irtifaq. Various kinds of punishment were practised upon those who were unable to satisfy the greed of the 'amils, to an extent that the cultivators often abandoned the cultivation of their land and were forced to emigrate.<sup>1</sup>

Abū Yūsuf says that the inhabitants of the Sawād faced many and often repulsive punishments because of the corrupt administration; and the greed of administrators, tax-collectors and their men.<sup>2</sup> At one period during the third century law and order seem to have been abandoned altogether.<sup>3</sup> Ibn al-'Athīr says that in Shā'ban 201 A.H. (February 817 A.D.) law and order had completely vanished and that most of the villages surrounding Baghdād were plundered. In one day, he said, all the belongings of the inhabitants of Qutrubull - the centre of one of the four richest districts surrounding Baghdād - were looted openly by the military element, and little imagination is needed to give a clear picture of the difficulties and privation suffered by the cultivators at that time.<sup>4</sup>

---

<sup>1</sup>Tabarī, XI, pp. 203-4.

<sup>2</sup>Abū Yūsuf, op.cit., p.62.

<sup>3</sup>Ya'qūbī, Ta'rikh, vol. III, p.218; Mas'ūdī, Murūj, V, pp. 106-7; cf. Duri, Dirasat, pp. 59ff.

<sup>4</sup>Ibn al-'Athīr, op.cit., vol. VI, p.133.

The government faced a difficult and dangerous position during the second half of the third century. There were revolts which started within the nine years following the assassination of the Caliph Mutawakkil. Discipline had degenerated into chaos among the Turkish guards and the government was powerless to ameliorate the condition of the cultivators.<sup>1</sup> During the dispute between the Caliphs Musta'in and Mu'tazz in 251 A.H., two most important areas surrounding Baghdad were flooded deliberately to prevent the approach of the Turkish soldiers and to gain more time to strengthen the city's defences.<sup>2</sup> After this, each of these caliphs sent letters to the 'amils of Kḥaraj throughout the state demanding that the amount of tax collected should be sent to him. Most of the inhabitants of the district either emigrated or fled in fear. Such episodes reflect the absence of a consistent and stable policy towards cultivation.<sup>3</sup>

The end of this chaotic period coincides with the start of the Zang revolt in the southern area of the Sawād on the 26th Ramazān, 255 A.H. (5th August 869) and continued until the

---

<sup>1</sup>Tabarī, Ta'rikh, II, p.1556; Ibn al-'Athīr, op.cit., vol. VII, p.55; Ibn Abī'l-Hadīd, Sharh, VIII, p.164. cf. Duri, Dirasat, p.59ff; Lewis, 'Abbasids', EI<sup>2</sup>, s.v.

<sup>2</sup>Tabarī, Ta'rikh, Vol. XI, p.97 (Husaniyya Press).

<sup>3</sup>Ibid., vol. XI, p.117.

2nd Safar 270 (11th August 883.)<sup>1</sup> The sources speak of co-operation between the leaders of the Zanj and the majority of the villagers of the Basra area, joined by peasants and cultivators from other villages in the Sawād.<sup>2</sup> Some of the inhabitants who were of Arabian origin supported the aim of the revolt leaders which was to capture Basra in 257 A.H./871 A.D.<sup>3</sup>

The support of the revolt by all classes of land-workers signifies their attitude towards the government and reflects its failure to protect the interests of agriculture against greed and vandalism.<sup>4</sup> In addition to the fighting which inevitably wrecked all production by them, the greed of the tax-collectors added to their poverty and exhaustion. Al-Baḥdādī, in his Kitāb al-farq bain al-firaq says that ignorant peasants were glad to accept the Carmathian principles and it is no surprise, therefore, that they supported the revolt in the Sawād in 278 A.H./891 A.D.<sup>5</sup> Tabarī says that after a mass killing of them, Badr (chief of the Caliphate forces) gave orders to cease the massacre because

---

<sup>1</sup>This revolt, according to Tabarī, who was a contemporary, lasted for 14 years, 4 months and 6 days. Ta'rikh, III, p.2098; Ibn al-'Athīr, op.cit., VII, pp. 81-2,170; Ibn 'Abī al-Ḥadīd, Sharḥ nahj al-Balaghah, VIII, p.126.

<sup>2</sup>Tabarī, op.cit., Vol. XI, pp. 180-1.

<sup>3</sup>Ibid., p.18.

<sup>4</sup>Ibid., pp. 213-4; Ibn al-'Athīr, op.cit., vol. VII, pp. 94-98; Ibn 'Abī al-Ḥadīd, op.cit., vol. VIII, pp. 149-164; cf. EI, s.v. 'Zandj'; Dūrī, Dirasat, pp. 75 ff.

<sup>5</sup>Al-Baḥdādī. al-farq bain al-firaq, p.141.

he realised the shortage of workers the Sawād would face if the troops continued.<sup>1</sup> But neither the conditions of cultivators was improved nor the extreme poverty of the peasants was alleviated, in spite of the tough measures taken by the military regime, which led them to support the Carmathians in their second rebellion in 289 A.H. (901-2 A.D.). in the district of Sawād al-Kūfa where the peasants faced similar conditions.<sup>2</sup> The nature of these two rebellions and the principles professed by its leaders and the whole-hearted support of the peasants, in spite of the threat of consequences, reflects the failure of the government to protect the lives and interests of the cultivators against corrupt administration. It is true to say that such an effort to curb it was made later by the Caliph Mu'tadid who reformed the date of tax collection to ease their condition, in addition to other amenities. But corruption was too deeply rooted to be immediately stamped out by any caliph who himself depended on the same machinery of administration.

### iii) Reform in Tax Assessment and Collection

An important change in Abbasid policy was concerned with tax assessment and collection. A reduction in the rate of collection was noticeable and postponement of the date of collection in order

---

<sup>1</sup>Tabarī, Ta'rikh, vol. III, p.2306; Ibn al-'Athīr, vol. VII, p.177.

<sup>2</sup>.Tabarī, op.cit., vol. III, pp. 2307-2309.

to make it coincide with the ripening of crops was a considerable step towards helping the majority of the population of Iraq. It certainly reflects a more enlightened policy on the part of the government.

In spite of Abū Yūsuf's advice to the Caliph Hārūn al-Rashīd, the rate of 50<sup>o</sup>/o of the produce was continued until 204 A.H. (819 A.D.).<sup>1</sup> In this year the Caliph Ma'mūn reduced the rate of tax on Kharāj land in the Sawād to 2/5<sup>2</sup>, i.e. 40<sup>o</sup>/o, and the sources say that this rate was continued in the Sawād during the third century A.H.<sup>3</sup> It is, however, important to realise that this was the theoretical percentage, whereas in practice there were various additions which raised the gross tax higher than it had been before the reduction in percentage. It is equally important to note that the reduction was only made on Kharāj land and did not apply to the tenure of other lands. The private estate owners (mulk) faced equally the difference between the tax theoretically imposed upon them and that which was actually collected. The tax on mulk land which was known as sadaqa was fixed at 10<sup>o</sup>/o of the 'ushr'.<sup>4</sup> In practice, according to Ṣābi,<sup>5</sup>

---

<sup>1</sup>Abū Yūsuf asked the caliph Hārūn al-Rashīd to apply different rates according to the type of irrigation used. The suggested rate varied between 40<sup>o</sup>/o and 25<sup>o</sup>/o of the products. See Kitāb al-Kharāj, pp. 28-9.

<sup>2</sup>The reduction in Khurasān, however, was larger than that in the Sawād. It represented 20<sup>o</sup>/o in the Sawād, and 25<sup>o</sup>/o in Khurasān. See Ṭabarī, op.cit., vol. III, p.774.

<sup>3</sup>The rate, according to Ṭabarī, was brought back to that originally imposed by the Caliph al-Mahdī. Ṭabarī, op.cit., vol. III, p.1039; Ibn al-'Aḥir, op.cit., vol. VI, p.147; Azdī, Ta'rikh al-Musul, Vol. II, p.300; Ibn Ṭabāṭaba, al-fakhri, p.198.

<sup>4</sup>Abū 'Uba'id, p.55.

<sup>5</sup>Ṣābi, op.cit., pp.336-7.



Ṣabī, it was as high as 25.0/o. This may have been the reason why a scholar, like Ahmad ibn Ḥanbal, complained and publicly condemned the whole system of taxation by the Abbasid government.<sup>1</sup>

The method of tax-collection always presented difficulty to both the government and the tax-payer.<sup>2</sup> The assessment of land-tax by estimate seems to have been the rule in Iraq during the third century, although it was similar in earlier periods. Abū Yūsuf opposed most types of estimation which were practised during his era and advised abolishment of them.<sup>3</sup> He refers in this respect to the practice of khars and the hazr, to which Khawārazmī added the takhmīn.<sup>4</sup> Each of these means 'the estimation' according to Ibn Manẓūr.<sup>5</sup> Khawārazmī, however, distinguishes between the particular use of these terms although their basic meaning is the same.<sup>6</sup>

The estimation of crop values was, as Professor C.E. Bosworth says,<sup>7</sup> a vital part of the mechanism of levying the muqāsama tax.

---

<sup>1</sup> Ibn Rajab al-Ḥanbalī, Kitāb al-istikhrāj, f. 34a.

<sup>2</sup> Infra,

<sup>3</sup> Abū Yūsuf, op.cit., p.62.

<sup>4</sup> Ibid.; Khawārazmī, Mafātīh, pp. 61-62; Bosworth, 'Abū 'Abdullāh al-Khawārazmī', JESHO, vol. XII (1969), p.137.

<sup>5</sup> Ibn Manẓūr, VIII, p.21. cf. Dozy, Supplément Aux Dictionnaires Arabes, Leiden (1881), s.v. Khars.

<sup>6</sup> The hazr is the valuation (tadīr) of produce from the cultivated land; while the hazr and the khars were the terms of estimation used exclusively for the date palm and vines, the takhmīn applied to green vegetables (khudār). See Khawārazmī, op.cit., p.60; cf. Bosworth, 'Abū 'Abdullāh', JESHO, vol. XII (1969), p.137.

<sup>7</sup> Bosworth, op.cit.; cf. Lewis, Daftar, El<sup>2</sup>, s.v.

The different times of ripening and harvesting made the operation difficult and also the evaluation of unripe crops was probably necessary because it was almost impossible to survey accurately large areas during the harvesting period.<sup>1</sup> Qudāma ibn Ja'far provides valuable information about the standard of land-tax (al-tusūq) which varied from time to time and one place from another.<sup>2</sup> "Al-Tusūq al-mukhtalifa" was estimated according to the quality of the land and to the terms of the share-cropping agreement.<sup>3</sup>

In spite of Abū Yūsuf's advice to abolish the practice of the Kharṣ and the Ḥazr<sup>4</sup>, there was no restriction on them by the government. The difficulties of surveying all the cultivated lands, or sharing the actual produce of the country during such a brief period, made it almost impossible to operate any reform against the corrupt practices in operation. In addition, the security of the treasury's finances and the needs of the government seem to have precluded any assistance given by them in this respect.

#### iv) The Reform of the Revenue Calendar

The institution of this reform by both the Caliphs Mutawakkil and Mu'taḍid represent an important step in the history of agriculture in Iraq. It is, however, necessary to point out that the principal

---

<sup>1</sup> Løkkegaard, op.cit., pp. 124-5.

<sup>2</sup> Qudāma, Kitāb al-Kharāj (MS), f. 88a; Ben Sheemosh, Islamic Taxation, II, pp. 38-9.

<sup>3</sup> Balādhurī, Futūh al-buldan, p. 379.

<sup>4</sup> Abū Yūsuf, op.cit., p. 62.

elements of this were in the revenue calendar before the date of the first reform. It is also necessary to understand the difficulties which normally faced the cultivators in order to evaluate the step taken by these two Caliphs.

Since the early years of Iraq occupation, the Muslim revenue practice had depended on the lunar year. Both the taxes, the sadaqa and the jawālī, were collected on the lunar-year basis. In the villages however, the jawālī tax was collected at the same time as the land tax which was on the basis of a solar year.<sup>1</sup> In addition to the Islamic calendar which commenced from the time of the prophet's emigration (hijra) to Medīna, several other calendars were in force in different localities. The Persian calendar was used in Iraq and in the eastern provinces, while the Coptic calendar was in use in Egypt and the Greek calendar in Syria.<sup>2</sup>

As to the land and other agricultural taxes in Iraq, the bulk of revenue payments were made in accordance with the Persian solar year which usually commenced with the nawrūz.<sup>3</sup> This was, in fact, regarded as the midsummer Solistic.<sup>4</sup> It was the time

---

<sup>1</sup> Ibid., p. 32; Maqrizī, Kitāb, II, pp. 19-20; Ibn Hawqal, op. cit., p. 308. cf. Mez, Renaissance, pp. 107-8; EI, s.v. 'nawruz'.

<sup>2</sup> Maqrizī, Kitāb, II, pp. 39-40. The lunar year has 354 days, the Persian, 365, the Coptic, 360 and the Greek, 365<sup>1</sup>/<sub>4</sub> days.

<sup>3</sup> Mas'ūdī, Murūj, Vol. III, p. 416. Ḥanẓa al-Iṣfahānī, Ta'rikh Sinīy muluk al-ard wa'l-anbiyā' (1340 Berlin), p. 104.

<sup>4</sup> Bīrūnī, Chronology, tr. Sachau, p. 185; EI<sup>1</sup>, s.v. 'nawruz'.

of harvest and marked the date when kharāj was collected. The Persian year, however fell annually about six hours behind the Solar year, which amounted to a quarter of a day in each 365 days, and in order to render it comparable, one extra day was added in each period of four years.<sup>1</sup> This practice assisted the land workers to pay taxes more easily when the crops had been harvested.

Yet in spite of the introduction of the new Islamic calendar, Muslim rulers preferred to adopt the Persian practice of nawrūz,<sup>2</sup> which is frequently represented in Arabic works as naīrūz, although it is not found in the Muslim lunar year.<sup>3</sup> Hamza al-Iṣfahānī states that in the first year of Hījra, nawrūz fell on the 18th Hazīrān (June) which he erroneously equates with the 1st Dhul Qi'da. The nawrūz was calculated on a similar basis to that of the Persian year, and was the starting date of the financial year as far as tax collection was concerned.<sup>4</sup>

According to the Qur'an, intercalation is strictly forbidden and, as has already been mentioned, the Islamic calendar was related to the lunar months and indicated specific dates for worship, such as pilgrimage and fasting.<sup>5</sup> But the prohibition seems to have been

---

<sup>1</sup> Bīrūnī, op.cit., p.36; cf. Dūrī, Iqtisādī, p.39; Bosworth, 'Abū 'Abdullah...', pp. 134-5.

<sup>2</sup> Qalqashandī, Ṣubḥ al-'a'shā, vol. II, p.408; cf. EI<sup>1</sup>, s.v. 'nawruz'.

<sup>3</sup> Mas'ūdī, Murūj, vol. III, p.416.

<sup>4</sup> Hamza al-Iṣfahānī, op.cit., p.104.

<sup>5</sup> Qur'an, Sura IX, verse 26.

enforced to cover many kinds of intercalation, including the Persian practice of adding one day in every four years to allow the time of year to correspond with the position of the sun.<sup>1</sup> It would seem, however, that the main reason for the prohibition was not for religious principle but the greed and unscrupulous avarice of the revenue officials who found it to their advantage to retain the unintercalated year.<sup>2</sup> The lunar calendar legalised the collection of taxes much earlier in the year and no consideration was given to the confusion and difficulties which it caused to the cultivators. Those who worked in the Sawād were forced to pay taxes on their land and cultivation while the corn was still green.<sup>3</sup> Moreover in the villages of the Sawād, ahl al-dhimma not only had to pay kharāj tax but also the jawālī tax together with other charges in advance of the harvest.<sup>4</sup>

By the end of the Umayyad period, the date of kharāj collection had advanced by a little more than a month and, as time passed, the gap widened until there was a difference of almost two months by the first half of the third century. A.H. The nawrūz, which originally fell on the 17th June (Hazîrân) now coincided with approximately the end of April. Bîrûnî describes the effect of this advancement on the cultivators of the Sawād. He says that it

---

<sup>1</sup>Bîrûnî, Chronology, p.37.

<sup>2</sup>Mas'ūdî, Tanbih, p.215. cf. EI<sup>1</sup>, s.v. 'nawrūz'.

<sup>3</sup>Bîrûnî, op.cit., pp. 31-3; Maqrîzî, Khitaṭ II, pp. 39-40. cf. Dūrî, Iqtisādî, p.39.

<sup>4</sup>Ahl al-dhimma in the Sawād had to pay their poll-tax in addition to the kharāj. Abū Yūsuf, op.cit., p.32.

did a great deal of harm to the people, so that they were compelled to incur debt and even to emigrate from their homes; complaints and wrongs were too numerous to count.<sup>1</sup>

The first attempt to rectify this problem was made by the Caliph Mutawakkil who made a personal investigation of the position which led to the reform of the revenue calendar. There were, however, disputes among contemporary and also among modern historians in regard to the actual date of Mutawakkil's revenue reform calendar. Ṭabarī, who was contemporary, gives detailed information concerning this. In his annals of the year 245 A.H. (859 A.D.) he states that the date to which nawruz was moved was Saturday, 11th Rabi' al-'awwal/17th Hazirān/28th Ardebihisht (according to the various calendars.)<sup>2</sup> Bīrūnī, who gives the year of the reform as 243 A.H. (857 A.D.) coincides with other information provided by Ṭabarī as to the day and month of this event.<sup>3</sup> Maqrizī, who died in 845 A.H. (1441 A.D.), stated that the revenue calculations for the year 241 A.H. (855 A.D.) were entered together with those of the year 242 A.H. (855 A.D.) and the revenue account was then brought up to date.<sup>4</sup>

---

<sup>1</sup>Bīrūnī, Chronology, p.31.

<sup>2</sup>Ṭabarī, Ta'rikh, III, p.1448, copied by Ibn al-'Athīr, al-Kāmil, vol. VII, p.34.

<sup>3</sup>Bīrūnī, Chronology, pp. 36-7.

<sup>4</sup>Maqrizī, Khitāt, vol. II, pp. 41-2; Irshād, vol. VI, p.117.

It would seem that the actual date of the revenue reform calendar under the Caliph Muktaṭṭakīl, as given by Ṭabarī, is more reliable than that given by Maqrīzī. Ṭabarī quotes from the court poet, al-Buḥṭurī, who was a contemporary witness of the event, as was also Ṭabarī.<sup>1</sup> In addition, he lived in Baghdad and was in direct relation with events in the capital, and because of the care and accuracy of his statements there would appear to be no reason to suggest that he was prevented from stating actual fact on this occasion. Maqrīzī's work is from a later period and another place, and his information is gathered from other sources.<sup>2</sup>

In his reconstruction of the fiscal calendar reform, Taqīzāda rejects Maqrīzī's account as giving the incorrect date of implementation. He argued that in 243 A.H. (857 A.D.) there was no nawrūz and that the next one fell in 254 A.H. (858 A.D.). The actual reform may have been possible in that year, but the Caliph Mutawakkil was away in Damascus, and it is unlikely that he instituted it at that time. Taqīzāda concludes the date to be 245 A.H. (859 A.D.) which agrees with the statement of Ṭabarī.<sup>3</sup>

---

<sup>1</sup>Buḥṭurī, the poet, says on this occasion: ان يوم النيروز عاد الى العهد الذي سبته اردشهر which can be translated as: "the day of nawrūz went back to the traditional date fixed by Ardashīr", Ṭabarī, III, p.1448; Ibn al-ʿAthīr, op.cit., vol. VII, p.34.

<sup>2</sup>It is worth mentioning that Maqrīzī quotes ibn al-Mudabbir, who was contemporary to the event.

<sup>3</sup>Taqīzāda, 'Various eras and calendars used in countries of Islam', BSOAS, IX (1937-39), pp. 908-10.

Professor Dūrī considers the statement both of Bīrūnī and Maqrīzī and suggests that the first step was taken in 243 A.H. (857 A.D.) which coincides with the statement by Bīrūnī.<sup>1</sup> Miāh completely rejected Taqrīzāda's conclusion and considered that Maqrīzī's account was correct.<sup>2</sup>

Whichever date is correct, the point accepted unanimously by all sources is that the date for the collection of taxes was adjusted during the forties of the third century A.H.,<sup>3</sup> and that such a measure was taken to relieve the strain upon cultivators in an attempt to end their just complaints.<sup>4</sup> The reform, unfortunately, had no lasting effect, and the same difficulties began to face the cultivators. The sources speak of several occasions when the 'irritāh al-kharāj<sup>5</sup> for the following year took place during the previous one, when land taxes were officially collected in advance. Tabarī says that on the 1st Ramaḍān 225 A.H. (13th August 869) the collection of kharāj tax for the year 256 A.H. (870 A.D.) began in 255 A.H. (869 A.D.).<sup>6</sup> Cultivators complained that most of the crops for the existing year were not even gathered. Similar statements are to be found among several papyri collections. In the PERF Papyri collection reference is made to

<sup>1</sup>Dūrī, Iqtisādī, p.39, no.1.

<sup>2</sup>Miāh, The Reign of al-Mutawakkil (Thesis), pp. 217-18.

<sup>3</sup>The Caliph Mutawakkil ordered the solar year to be adjusted with the lunar year by intercalating 33 lunar years and making them equal to 32 solar years. Maqrīzī, Khiṭaṭ, vol. II, pp. 41-2.

<sup>4</sup>Tabarī, op.cit., III, p.1448; Ibn al-'Athīr, op.cit., vol. VII, p.34; Bīrūnī, Chronology, p.31; Maqrīzī, Khiṭaṭ, vol. II, pp. 41-2; Irshād, vol. VI, p.117; cf. Dūrī, Iqtisādī p.39; Miāh, op.cit. pp. 212-4; ET<sup>1</sup>, s.v. 'Nawruz'.



taxes due for the year 253 A.H. (867 A.D.) being demanded during the year 252 A.H. (866 A.D.).<sup>1</sup> Similar information is found in other collections. There is a reference in P. Berel collection to the kharāj tax of the year 253 A.H. (867 A.D.) which should not have been taken until the year 254 A.H. (868 A.D.).<sup>2</sup> Another occurs in PER. Inv.Ar.Pap; there it is found that kharāj tax for the year 260 A.H. (873 A.D.) had been collected in 259 A.H. (872-3 A.D.).<sup>3</sup> Again, in PSR collection, kharāj tax for the year 268 A.H. (881-2 A.D.) represented the amount due in the year 269 A.H. (882-3 A.D.).<sup>4</sup> Further injustices of this are mentioned in the PERF collection concerning similar pre-due taxes for the year 274 A.H. (887-8 A.D.) being taken in the year 273 A.H. (886-7 A.D.).<sup>5</sup>

All these instances suggest that al-Mutawakkil's attempt to reform, as has already been stated, were not continued after his death. The Caliph Mu'taḍid was compelled to adjust the date of the nawrūz. Tabārī indicates that, in Muḥarram, 282 A.H. (March 895 A.D.) the Caliph Mu'taḍid circulated an order which abolished

---

<sup>5</sup>Bosworth, "Abu 'Abdallah...", pp. 134-5.

<sup>6</sup>Tabārī, Ta'rikh, III, pp. 1730-9.

<sup>1</sup>PERF collection, No. 279.

<sup>2</sup>P. Berel collection, No. 9067.

<sup>3</sup>PER Inv. Aw. Pap. No. 3628, line 5.

<sup>4</sup>PSR, No. 187, line 4.

<sup>5</sup>PERF No. 836, lines 3-6

the traditional day of nawrūz or nairūz al 'ajam and instituting an official day for the commencement of kharāj-collection (iftitāh al-kharāj) which was stipulated as the 11th June, and known as al-nairūz al-Mu'taḍidī. This coincided with the solar and not the lunar year.<sup>1</sup>

Bīrūnī points out that there was a difference between the calculations made by Caliph Mu'taḍid and those made earlier by the Caliph Mutawakkil in respect of the commencing date. Al-Mutawakkil calculated the commencement of nawrūz from the beginning of the reign of Yazdajird III, whereas the Caliph Mu'taḍid's calculations were based from the end of Yazdajird's reign.<sup>2</sup> It appears, however, that neither calculation was accurate and does not coincide with the original date of nawrūz as estimated by the Persian calendar.<sup>3</sup> The reform made during Mu'taḍid's reign, however, adjusted the date of collection to commence after harvesting the crops and was described as being "a memorable benefit to the nation".<sup>4</sup> Ṭabarī quotes from an official letter sent from the Caliph to the head of diwān al-Kharāj,<sup>5</sup> when the Caliph himself was in Mosul, and includes his order in this respect. It also indicates that the main reason for this reform

---

<sup>5</sup>PERT No. 836, lines 3-6.

<sup>1</sup>Ṭabarī, III, p.2143; Ibn al-'Athīr, vol. VII, p.186.

<sup>2</sup>Bīrūnī, Chronology, p.37.

<sup>3</sup>The intercalation allowed only 60 days instead of the 77 days

was the personal desire of the caliph "to treat the people with kindness and to let them live in ease".<sup>1</sup>

Moreover a significant reference given by Ṭabarī indicates that the reform was an effective step towards stability which had been lacking during the Zang revolt. It was certainly sufficient to encourage the return of emigrant cultivators to their villages and farms. This was doubtless the reason why the Caliph himself gave orders that the reform should be announced and his letter to the dīwān was to be publicly read.<sup>2</sup> Whatever the reasons, credit must be given to the Caliph Mu'taḍid. The reform seems to express his desire for the betterment of the population.

The two reforms with which this chapter is concerned are the only ones recorded concerning tax collection during the period of this study, and are indeed, the only ones mentioned during the first four centuries of the Islamic history of Iraq.<sup>3</sup>

---

which was the actual difference between the old Persian calendar and that in practice during the time of Mu'taḍid. See Bīrūnī, Chronology, p.37.

<sup>4</sup>Ṭabarī, op.cit., III, p.2143.

<sup>5</sup>The chief of Dīwān al-Kharāj at that time was Yūsuf ibn Ya'qūb. Ibid.

<sup>1</sup>وكتب اليه يعلمهم انه اراد بذلك الترقية عن الناس

Ṭabarī, op.cit., III, p.2143.

<sup>2</sup>وامر ابن يقرا كتابه على الناس

Ibid.

<sup>3</sup>The next attempt to reform the date of tax-collection was during the reign of Jalāl al-dawla Malik-Shāh (465 A.H./1072 A.D.). EI<sup>1</sup>, s.v. 'nawrūz'.

v) The Policy of 'Iqtā'.

A problem which faced the economic structure of the Abbasid state, and specially affected its agricultural policy, was the 'iqṭā'.

After the early Arab conquests of Iraq, the land could be classified broadly into three categories:

- a) that which continued to be held by its original holders who had agreed, whether by peaceful negotiation or by force, to pay the land tax (Kharāj);<sup>1</sup>
- b) land which had been abandoned by its owners, thus providing the basis of the private state. This included practically all the Sawāfī and the milk lands;<sup>2</sup>
- c) land which had had no specific owner since the pre-Islamic period and was considered, after the Arab conquest, as common land.<sup>3</sup> Some of this was known as waste land (mawāt); uncultivated land (ghāmīr) or pasture land. Included in the common land were highways, roads, river banks, etc. In theory, grants of land were only permitted to be made from the second category, and the granting was the prerogative of the ruler, and the recipients, theoretically Muslim.<sup>4</sup>

---

<sup>1</sup> This is the kharāj land or ard al-fay'; whether conquered by force or peacefully agreed. Qudāma, Kharāj (MS), fols. 80b-83a. cf. Ben Shemeh, Taxation in Islam, vol. II, pp. 25-9.

<sup>2</sup> Qudāma listed six categories of land under the heading 'ard al-'Ushr' ('ushr paying land'), Kharāj (MS), fols. 79b-80a. cf. Ben Shemesh, Taxation in Islam, vol. II (1965), pp. 23-4.

<sup>3</sup> Ibn Ḥamdūn, Tadhkira (MS. RP), vol. IV, fol. 247a.

<sup>4</sup> Abū Yūsuf, op.cit., pp. 33-4, 55.

In practice, however, it proved impossible to prevent the conquerors from annexing large areas of land as private property from all three mentioned categories. These lands were known as qaṭī'as (singular qaṭī'a) and were subject to the 'Ushr (tithe).<sup>1</sup> Grants thus obtained differed from the relatively large areas of land as qaṭī'a which Becker and others have compared with the emphyteutic grants of the Byzantine Empire. Rather they were similar to the small estates which were held in full ownership by the peasant-soldiers of the Byzantine frontier areas as payment for military service.<sup>2</sup> In the course of time the qaṭī'a grants came to be known as iqṭa'a.

Qudāma ibn Ja'far uses both the terms "iqṭa'a" and "qaṭī'a" to mean a hereditary grant which was subject to the 'ushr; whereas he calls a non-hereditary grant ṭu'mā.<sup>3</sup> Khawārazmī defines the ṭu'mā as an estate handed over to a person in order to cultivate it and on which the tithe must be paid. During the period of his lifetime it was his property, but at death it reverted to the state.<sup>4</sup> and was known as murtajī'a.<sup>5</sup> Such

---

<sup>1</sup>Qudāma, op.cit., fols. 97b-80a. There is no doubt that the institution of 'iqṭa' can be traced to the time of the Prophet. Løkkgaard says that it was genuinely Arabic in origin, despite any foreign element which afterwards entered the nation. cf. Løkkgaard, op.cit., p.14; Lambton, 'Reflection'. p.360.

<sup>2</sup>C. Cahen, 'L'evolution de l''iqṭa' du IX<sup>e</sup> au XIII<sup>e</sup> Siècle', Annales ESC (1953), p.26; cf. Lambton, 'Reflection' pp. 360 ff.

<sup>3</sup>Qudāma, Kharāj (MS), fol. 86b; cf. Ben Shomesh, Taxation in Islam, II, p.36, n.5.

<sup>4</sup>Khawārazmī, Mafatih, p.60; cf. Bosworth, 'Abu 'Abdallāh...', JESHO p.133; Løkkgaard, op.cit., pp. 60, 152.

practice differs, however, from that of the ighār and taswigh.

Both 'ighār and taswigh seem to be another type of grant. The 'ighār is a tax-free grant of land by a ruler to an individual.<sup>1</sup> Qudāma, in his comment on 'ighārīn and 'ighār yaqtīn, written in the 10th century, states that the price of 'ighār was not even known during pre-Islamic times.<sup>2</sup> The sources speak of several day'ās in the Sawād granted to Yaqtīn Ṣahib al-da'wa at the commencement of the Abbasid state, which became known of 'ighār yaqtīn.<sup>3</sup> Both Qudāma and ibn Khurradādhbeh refer to other 'iqṭā' lands, known as ighārīn.<sup>4</sup> Qudāma mentions ighārīn in connection with a number of day'ās from several districts and sub-districts of the Sawād.<sup>5</sup> He also refers to several 'ighārs in various districts of the Abbasid domains other than those referred to as in the Sawād.<sup>6</sup> Ibn Khurradādhbeh, on the other hand, mentioned other ighārīn in various day'ās in the Saīyybān and al-Waqūf and a number of other districts in southern Iraq.<sup>7</sup>

---

<sup>5</sup>The irtija' was the technical term for the resumption of land grants. See Amodroz, op.cit., p.832; cf. Sourdcl, op.cit., II, p.592; Bosworth, op.cit., p.133.

<sup>1</sup>Ṣabī, op.cit., p.42; cf. Yāqūt, Mu'jam al-Buldan (1955-7), vol. I, p.290; s.v. 'al-ighārīn'; ibn Manẓūr, Lisān al-'Arab, vol. VII, p.150. Cf. Cl. Cahen, 'Ighār', EI<sup>2</sup>, s.v.

<sup>2</sup>Qudāma, Nubadh, p.241.

<sup>3</sup>Ibid.; cf. Le Strange, The Land of the Eastern Caliphate (1905), Cambridge, pp. 197-8.

<sup>4</sup>Qudāma, Nubadh, p.243; ibn Khurradādhbeh, op.cit., p.36.

<sup>5</sup>Qudāma defines the 'ighār as a fief protected from the interference of tax collectors, supervisors or their agents. For such protection a yearly levy was imposed in the name of the Imam, treasury or

Khawārazmī describes the 'īghārs as "land which cannot be entered upon, that is the estate or village in question was considered inviolable and no 'amil may enter it."<sup>1</sup> The beneficiaries had the right to pay their dues yearly, either to the central treasury in the capital or to that in the provincial cities.<sup>2</sup>

In practice, this privilege allowed the landowners to farm their own taxes and guaranteed them himāya against the extortion of unscrupulous tax-collectors.<sup>3</sup> If a landowner became overburdened by taxation he would seek protection from a higher official, or perhaps a vizier or even a prince. He would commend his land to the great man who became responsible for the taxation due from the land. In this way, the circumstances of talji'a<sup>4</sup> were spread. When it passed under the talji'a, the new owner escaped payment of the accrued tax by assimilating the acquired land to gati'a land which only paid the 'ushr (i.e. the tithe). Under certain conditions the owner of the day'a under consideration had to pay an additional amount, either as a fixed cash payment or a certain portion of the produce of the day'a to the second party.<sup>5</sup>

---

military authorities. See Qudāma, Kharāj (MS), fol.86a; Nubadh, p.234; cf. Bon Shemosh, Taxation in Islam, vol. II, p.363; Kramer, Culturgesh des Orients, vol. I, p.278.

<sup>6</sup>Such as Mahrajān-qadhq, Masabdhān and Qum. See Qudāma, op.cit., fol.86a.

<sup>7</sup>Ibn Khurradādhbeh, Masalik, p.19.

<sup>1</sup>Khawārazmī, op.cit., p.60. cf. Bosworth, op.cit., pp.133-4.

<sup>2</sup>Ibid.

<sup>3</sup>Abū Yūsuf, op.cit., p.60; cf. Løkkegaard, op.cit., p.67.

<sup>4</sup>Tanūkhī mentions that a landowner offered to give the Caliph Abū Ja'far al-Manṣūr 25<sup>0</sup>/o of the products of his own land in addition to the usual tax on condition that the Caliph would allow the land to be registered under his name as a precaution against the extortion of the tax-collectors. Nishwar, VIII, p.76.

The right to receive this fee, as Professor Cahen points out, made the land the property of the superior party and the land under himāya might be inherited as could be any other type of property. The practice of the himāya sometimes resulted in a shared property, but as time passed, the protector often became the virtual owner, because it was usually impossible for the original owner to prove his claim against the assertion of a superior who referred to the tax register for confirmation of the claim.<sup>1</sup> Under these conditions many of the original landowners were reduced to the status of mere share-croppers or metayer.<sup>2</sup>

The conditions also indicate the use of talji'a by the more powerful landowners to build up for themselves very large domains and perhaps provided justification for the confiscation policy which was followed by the Abbasid Caliphs during the first half of the 3rd century A.H.<sup>3</sup>

---

Both Qudāma, Nubadh, p.241 and ibn al-Faqīh, Buldān, pp. 282, 284, mention many cases of 'iljā' and that the Umayyad Prince Maslama b. 'Abd al-Malik was the protector. Jahshīyārī, Wuzarā', p.118, refers to one case of 'iljā' by an Abbasid vizier; cf. Dūrī, Iqtisādī, p.34; Løkkegaard, op.cit., pp. 67, nos. 244-245.

<sup>5</sup> Tanūkhī, op.cit., VIII, p.75; ibn al-Faqīh, Buldān, p.282; Iṣṭakhrī, al-Masallik, p.158.

Similar tax-avoiding procedures had been known in Byzantium and pre-Islamic Persia. cf. Mez, The Renaissance of Islam, pp. 111-12; Løkkegaard, Islamic taxation, p.67, nos. 246, 247; Cl. Cahen, 'L'evolution...', Annales ESC, VIII (1953), pp. 31 ff, 'Notes pour l'histoire de la Himāya', Mélanges Louis Massignou, I (1956), pp. 257-303; Prof. Bosworth, op.cit., p.139.

<sup>1</sup> Abshīhī, Mustazraf, vol. I, p.129; cf. Cahen, s.v. 'Himāya', EI<sup>2</sup>.

<sup>2</sup> Qudāma, Nubadh, p.241; Tha'ālībī, Khass al-Khass, p.168; cf. Zaidān, al-tamaddum, vol. II, p.131; Cahen, 'Himāya', EI<sup>2</sup>. Dūrī, Iqtisādī, p.35.



Professor Lambton, however, considers the 'īghār to have been partly tax-free and partly hereditable.<sup>1</sup> Løkkegaard, on the other hand, states that the 'īghār was only practised on a freehold estate, and that it was frequently the favourites of the court who were able to obtain these favourable grants.<sup>2</sup> Moreover the 'īghār could be transmitted hereditarily and no legal action against the holder could subsequently be enforced. When a contract had to be renewed, a fine for this service could not be exacted.<sup>3</sup> It would seem, however, that the nature of the tenure of the 'īghār could be changed in accordance with the caliph's decision. Balādhurī, for instance, produces an example which, although it concerned a province other than the Sawād, proved that the legal statute and the tax dues on it relied mainly on the decision taken by the Caliph.<sup>4</sup> Šabī gives

---

<sup>3</sup>In the year 240 A.H./854 A.D., according to Tabarī, 4,000 jarībs were confiscated from the Qādī Yahyā ibn Aktham alone, Tā'rikh, III, p.1421.

More examples were produced by Tabarī and other sources. See Tabarī, op.cit., III, pp. 1378, 1445; also Ya'qubī, Tā'rikh, II, pp. 592-3, 597, 600; cf. Duri, Iqtisādī, pp. 278-83; Miāh, op.cit., pp. 236-7; Levy, EI<sup>1</sup>, Suppl. s.v. 'Maṣādara'; Bosworth, op.cit., p.138.

<sup>1</sup>Lambton, Landlord and Peasant in Persia, Oxford (1953), p.22.

<sup>2</sup>Qudāma, Kharāj (MS), fol. 98a; cf. Løkkegaard, op.cit., pp. 62, 189-90.

<sup>3</sup>Qalqashandī, Subḥ al-a'shā, XIII, p.131; cf. Løkkegaard, op.cit., p.190.

<sup>4</sup>Balādhurī, Futūḥ, p.187.

another example in this respect when he mentioned details of the argument between Ḥamid ibn al-ʿAbbas and ʿAlī ibn al-Furāt, the ex-vizier, during the reign of the Caliph Muqtadir. Ḥamid accused ibn al-Furāt of paying no taxes on his lands under the pretext that they were ʿiḡhār. These references all point to the conclusion that the ʿiḡhār was a special privilege grant during the period under consideration. This view agrees with that of Professor Cahen, who considers the ʿiḡhār as an exemption or privilege with respect to taxes.<sup>1</sup>

Løkkegaard connected the term taswīgh with the tax immunity enjoyed by the grantee of an ʿiḡhār and asserted that the terms were, at times, synonymous.<sup>2</sup> Professor Cahen points out that the taswīgh is really an exemption from taxation or a reduction granted as an occasional privilege for a year or annually.<sup>3</sup>

The practice of ʿihtimāl, on the other hand, seems to be similar to that of the taswīgh, and refers to an exemption from dues on land for a certain period.<sup>4</sup> The difference between them appears to be that while the ʿihtimāl was an exemption from all land taxes for a limited time, the taswīgh claimed a percentage of reduction for the duration of the cultivators lifetime.<sup>5</sup> Khawārazmī gives

<sup>1</sup>Ṣābī, *Wuzarāʾ*, p.42. cf. Dūrī, *Iqtisādī*, p.35.

<sup>2</sup>Løkkegaard, *op.cit.*, pp. 69-70, 189-90.

<sup>3</sup>Cahen, 'Review of Lokkegaard's Islamic Taxation', *Arabica*, vol. I, (1954), p.351; 'L'Evolution de l'iqṭāʿ', *Annales, ESC* (1953), p.28.

<sup>4</sup>Isfahānī, *Aghānī*, vol. V, p.419.

<sup>5</sup>Ṭabarī, vol. III, pp. 774-1030; ibn al-Faqīh, *op.cit.*, p.270;

the terms ḥaṭiṭa and tarika the same definition as taswigh.<sup>1</sup>  
Both the 'iḡhar and taswigh were made on kharāj land and were under dīwān al-Kharāj, while the ṭu'ma and the qaṭā'i were taken on that which was not kharāj land. These were under dīwān al-ḡiyā.<sup>2</sup>

According to the sources the 'iqṭā' is defined as a grant of land to a person (muṭṭa') by a ruler (muṭṭi'). According to this grant, the muṭṭa' was entitled to dispose of it as he wished. It could be converted to buildings, orchards, used for agricultural cultivation, fallowed or sold, and full hereditary rights were included in the grant.<sup>3</sup> Mez suggests that the conception of the 'iqṭā', whether in the eastern or western provinces, of Islamic territory, was inherited from earlier periods. Mez, however, depended on Abū Yūsuf's statement concerning the qaṭā'i in the Sawād. Close examination of Abū Yūsuf's statement concerning this matter, and according to the explanation given by Qudāma later in the fourth century, it would appear that gave his opinion without a clear understanding of the source in this respect.<sup>4</sup>

---

Ṭaifūr, op.cit., p.235; Azdī, op.cit., II, p.271; Khawārazmī, op.cit., p.60; cf. Løkkegaard, op.cit., pp. 69-70, 189-90; Bosworth, op.cit., p.134.

<sup>1</sup>Khawārazmī, op.cit., p.60; Bosworth, op.cit., p.134; cf. Dozy, I, 300b-301a.

<sup>2</sup>Qudāma, Kharāj (MS), fol. 17b; cf. Cahen, 'L'evolution...', Annales, ESC (1953), p.28. Lambton, Reflections in Arabic and Islamic Studies in Honour of H.A.R.Gibb (1965), p.361.

<sup>3</sup>Abū Yūsuf, Kharāj, pp. 32-4; Qudāma, Kharāj (MS), fol. 86a; Khawārazmī, op.cit., p.60; cf. Ben Shemesh, Taxation in Islam, Vol. II, p.36; Durī, Iqtisādī, p.27; Bosworth, op.cit. pp. 133-4.

<sup>4</sup>Abū Yūsuf, op.cit., p.32. Qudāma, however, refers to six categories under the title of Ṣawafī, as being the kind of land liable to be

A comparison of the main characteristics of the 'iqṭā' during the period under consideration with the characteristics of Sassanid feudalism shows that the 'iqṭā' system of the Abbasids was not derived from any of the various types of feudalism found in pre-Islamic Persia. The views expressed by Professor Lambton are more acceptable. They show that the circumstances which accompanied the rise and development of the 'iqṭā' system and the circumstances of the Arab conquest were not a continuation of Sassanid feudalism in Islamic dress.<sup>1</sup>

Abū Yūsuf points out that the Imām (i.e. caliph) could grant 'iqṭā' only from his own estates, which included the Ṣawāfi.<sup>2</sup>

Another scholar of the Ḥanbalite school emphasised that under special conditions the 'iqṭā' could be granted from kharājī land.<sup>3</sup> Abū Yūsuf, however, opposed any grant from the common property of the Muslims. This included rivers, roads, ponds and all other communal property in addition to kharājī lands.<sup>4</sup> Sometimes a land was not originally kharājī land but was watered by kharājī

---

granted as 'iqṭā'. Kharāj (MS), fol. 86a; cf. Ben Shemesh, Taxation in Islam, vol. II, p.36; This in fact explains the above-mentioned statement of Abū Yūsuf. Māwardī also clarifies this when he states that the 'iqṭā' was granted only from the Imam's own lands. (i.e. the Ṣawāfi), Al-aḥkām al-Sultāniyya, p.183.

---

<sup>1</sup> Lambton, 'Reflections..', Arabic and Islamic Studies in Honour of H.A.R.Gibb (1965), Leiden, p.359.

<sup>2</sup> Abū Yūsuf, op.cit., p.32.

<sup>3</sup> In Kitāb al-istikhrāj fī aḥkām al-kharāj, fols. 117a, 136a, Ibn Rajab al-Ḥanbalī mentions 'iqṭā' al-'ijara', which he describes as a conditional grant by which the muṣṭa' had to pay a certain sum of money or a fixed percentage of produce regularly, which was considered as ḥaqq al-fay' (i.e. the kharāj tax). Then he gives his definition of the legal 'iqṭā'', stressing the regular payment which he considered to be similar to rent.

rivers. There were occasions when it was given as 'iqṭā' despite the fact that it was theoretically regarded as kharājī land,<sup>1</sup> but in practice, jurisdiction rules were often ignored.<sup>2</sup> The fief-holders (muṣṭa'in) contrary to other feudal landlords, had no special military obligations, but their land was subject to 'ushr (i.e. 10<sup>0</sup>/o of the yearly produce). The muṣṭa' was responsible for his share of the cost of newly created water-courses, and the maintenance of irrigation canals and bridges within his 'iqṭā'.<sup>3</sup>

The caliph continued to be the only granter of the 'iqṭā' during the third century. However, due to financial or personal reasons and in spite of contradiction of the principle of 'iqṭā' as indicated by the jurists, the Abbasid caliphs frequently confiscated or revoked an 'iqṭā'. Such incidents were more frequent during the latter years of the third century - indeed, so much so, - that the establishment of a special dīwān al-Murtajī'a or al-Murtajī'at became necessary.<sup>4</sup>

The jurists, however, considered the 'iqṭā' mainly under two headings. These were based on whether the rights of the muṣṭa' conferred by the 'Imām included heredity. 'Iqṭā's were classified

<sup>4</sup>Abū Yūsuf, op.cit., p.53.

<sup>1</sup>Ibid., p.33.

<sup>2</sup>Miskawāh, op.cit., vol. I, p.36; cf. Dūrī, Iqtisādī, p.28.

<sup>3</sup>Ṭabari, Ta'rikh, III, p.2153.

<sup>4</sup>Arābī, op.cit., p.145.

as 'iqṭā' ijāra and 'iqṭā' Tamlīk. The first of these, which later became known as iqṭā' istighlāl<sup>1</sup>, was an allotment for the purpose of taking the proceeds of the land assigned on condition that the beneficiary paid the 'ushr' (i.e. 10<sup>0</sup>/o), as fay.<sup>2</sup> Such 'iqṭā'', however, had no hereditary right.<sup>3</sup> The iqṭā' tamlīk was a grant made of a piece of barren land (mawāt) given to the muqṭa' on condition of its resuscitation, or a grant of cultivated land to which there was no heir. In the latter case the muqṭa' was given full hereditary ownership and was liable for the 'ushr'.<sup>4</sup>

The 'iqṭā'' depended upon the reason for its grant having been made by the muqṭi' (i.e. the caliph) to the beneficiary. In some instances the rights conferred according to the 'iqṭā''s appear to have been negligible. The sources speak of many 'iqṭā''s granted by various caliphs. The beneficiaries usually held high-ranking posts such as 'amils, viziers, jurists, poets, singers, palace attendants and soldiers.

During the third century, 'iqṭā''s seem to have been granted in three distinct ways: - those to civil servants, military servants

<sup>1</sup> Mawardī, op.cit., p.184; Qalqashandī, op.cit., III, pp. 115-7. cf. Dūrī, Iqtisādī, p.28.

<sup>2</sup> Abū Yūsuf, op.cit., p.30; ibn Rajab, op.cit., fol. 117a. cf. Dūrī, Iqtisādī, p.28, no. 8.

<sup>3</sup> Such forms of 'iqṭā'' were sometimes known as 'iqṭā' tadmīn'; cf. Løkkegaard, op.cit., p.59, no.189.

<sup>4</sup> Qudāma, Kharāj (MS), fols. 90b-91a; Khawārazmī, op.cit., p.60; cf. Løkkegaard, op.cit., pp. 58-9; Ben Shemesh, Taxation in Islam, II, pp. 37-41; Bosworth, op.cit., p.133, also Dūrī, Iqtisādī, p.28.

and private 'iqṭā'. Those granted to civil servants were in lieu of salaries, many recipients holding the post of vizier appear to have been entitled to receive special 'iqṭā', the produce from which replaced the salary due. Such 'iqṭā' which were known as 'iqṭā' al-wizāra, were neither hereditary nor were they even for the lifetime of the beneficiary, but only until the expiration of the vizier's term of office when his right of 'iqṭā' al-wizāra was transferred to the new vizier.<sup>1</sup> An example of this type of 'iqṭā' occurs when Sabī submitted his list of expenditure during the reign of the Caliph Mu'taḍid.<sup>2</sup> The vizier, 'Ubaīdullāh ibn Sulāimān, seems to have received his salary from the treasury until 'iqṭā' al-wizāra was in production, at which time his salary ceased.<sup>3</sup> This kind of 'iqṭā' was usually extensive and its produce far above even the vizier's high rate of expenditure and was sufficient to cover the needs of his family and dependents.<sup>4</sup> In the particular instance, provided by Ṣābī, not only did the salary of the vizier cease, but he was able to pay 200,000 dīnārs yearly during his term of office.<sup>5</sup>

---

<sup>1</sup> Tanūkhī, op.cit., vol. I, p.137; Ṣābī, op.cit., pp. 23-5; 'Arīb, al-Qurṭubī, op.cit., p.135.

<sup>2</sup> Ṣābī, op.cit., pp. 13-27.

<sup>3</sup> Ibid., pp. 25-6.

<sup>4</sup> The yearly income from 'iqṭā' al-wizāra averaged no less than 50,000 dīnārs. See ibid., p.23; Miskawāh, vol. I, p.159; vol. II, p.241; Yaḳūt, Mu'jam, vol. V, p.278; cf. Dūrī, Iqtisādī, p.29, no.2.

<sup>5</sup> Ṣābī, op.cit., pp. 25-6.

'Arīb al-Qurṭubī later refers to this type of 'iqṭā' as being administered by a special dīwān known as dīwān 'iqṭā' al-wuzara, which was set up to deal with them.<sup>1</sup> This does not, however, indicate the dimension of the 'iqṭā' al-wizara nor yet when the practice commenced. The sources speak of similar grants made by the Caliph Mu'tasim to other high officials such as the secretaries of the dīwāns in Sāmarra.<sup>2</sup> There were also similar grants given to the Kuttāb in 245 A.H. (859 A.D.) by the Caliph Mutawakkil to celebrate the building of the new residential area to the north of the capital of that period.<sup>3</sup> Military personnel were sometimes granted 'iqṭā's and such practices had been known in Iraq during previous periods.<sup>4</sup> During the third century A.H., the sources speak of 'iqṭā's granted to the chief of the military forces. The Caliph Ma'mūn granted 'iqṭā's to Tāhir ibn al-Ḥusain; the Caliph Mu'tasim, who reinforced his military strength with Turkish soldiers, granted the Turkish leader Ishḡas and several of his staff important 'iqṭā's in a district of his new capital, Sāmarra.<sup>5</sup> During the reign of the Caliph Wāthiq, the 'īyā Khayya, which lay to the east of the capital and was watered by the Qāṭūl Canal, a most important fruit-producing district became an 'iqṭā' granted by the caliph to the Turkish leader 'īyāk. The Caliph Mutawakkil gave a similar grant according to Tabarī, when he granted Waṣīf and other

---

<sup>1</sup> 'Arīb al-Qurṭubī, op. cit., p.135.

<sup>2</sup> Ya'qūbī, Bulḍān, p.258.

<sup>3</sup> Tabarī, Tā'rikh, vol. III, p.1438.

<sup>4</sup> The 'iqṭā' granted by the Caliph Ḥanūn al-Rashīd to his leader Abd al-Malik ibn Ṣāliḥ was one of the many examples in this respect. See Maqrīzī, Khitaṭ, vol. II, p.103.

<sup>5</sup> Ya'qūbī, Bulḍān, pp. 258, 277.



military leaders 'iqṭā's in the area around his capital, Sāmarrā, in the vicinity of Maḥūza and Ḥir.<sup>1</sup> In 250 A.H. (864 A.D.) the Caliph Musta'in granted Muḥammad ibn 'Abdullāh ibn Ṭāhir a portion of the highly productive Sawāfī land in the Ṭabaristān area.<sup>2</sup> Bāghir, the Turkish officer, who seems to have taken part in the murder of Caliph Mutawakkil, was granted several villages in the Sawād near Kūfa, also as 'iqṭā's. Ṭabarī says that some 2,000 dīnārs were paid yearly to Bāghir as daman for this grant.<sup>3</sup> Iṣṭakhṛī, later, describes how the granting of 'iqṭā's was used by the Abbasid caliphs on a large scale in their efforts to keep the Turkish leaders busy and to get rid of them.<sup>4</sup>

It is worth noting that 'iqṭā's, whether granted to soldiers or to high military personnel, did not commit the recipients to any form of military service. The large number granted the Mustaghilla land, in the area near the capital Sāmarrā, help to provide an idea concerning 'iqṭā' al-istighlāl which was assigned to soldiers. It does not, however, indicate the size of the portions of land assigned to individuals. It would seem that frequently the 'iqṭā' was relatively small and only sufficient to support one

---

<sup>1</sup> Balādhurī, Futūḥ, p.295; Ṭabarī, Tā'riḫ, vol. III, p.1438; Yāqūbī, Buldan, p.189; ibn al-'Aṭhīr, op.cit., vol. VII, p.33.

<sup>2</sup> Ṭabarī, Tā'riḫ, vol. III, p.1524.

<sup>3</sup> Ibid., p.1535; ibn al-'Aṭhīr, op.cit., vol. VII, p.52.

<sup>4</sup> Iṣṭakhṛī, op.cit., p.142.

family. Professor Lambton suggests that it "differed from both the large emphyteutic grants of the Byzantine Empire and the large estates which had formerly existed in the Sassanid empire".<sup>1</sup>

According to Professor Cahen, the assignments to military personnel, were made by the treasury dīwān bayt al-māl with the concurrence of dīwān al-nafaqāt and dīwān al-jaiṣh.<sup>2</sup>

Private grants, 'iqṭā' at Khassa, can be classified under two categories. The first type of 'iqṭā' was that granted by the caliph to individuals, and not to official, civil or military personnel - they were rewards of merit.<sup>3</sup> The sources produce evidence that 'iqṭā' of this kind conferred the muqṭa' with full hereditary ownership and were normally made from part of the Ṣawāfī land. On the occasion of his marriage, to Būrān, the daughter of al-Ḥasan ibn Sahl, in Ramaḍān 204 A.H. (Feb. 820 A.D.), the Caliph Ma'mūn granted his father-in-law the Silḥ as 'iqṭā' in addition to one million dīnārs.<sup>4</sup> Al-Khaṭīb al-Baghḍādī points out that the cultivated lands on both sides of

<sup>1</sup>Lambton, 'Reflections...', p.361.

<sup>2</sup>Cahen, 'L'evolution de l'iqṭā' ...', Annales, ESC (1953), pp. 36-7; cf. Lambton, 'Reflections...', p.368; Løkkegaard, op.cit., p.120; Miah, op.cit., p.241.

<sup>3</sup>For example, see Tanūkhī, op.cit., vol. VIII, p.28; Ṣābī, op.cit. pp. 163-4; Aghānī, vol. V, pp. 166-176.

<sup>4</sup>Khaṭīb al-Baghḍādī, Ta'rīkh Baghḍād, vol. VII, pp. 320-1; Taifūr, Baghḍād, p.209; ibn Khallikān, however, says that the event took place not as mentioned above, but in Shawwāl, 210 A.H./Feb.826 A.D.

the Ṣarāt Canal were originally 'iqṭā' from the Caliph Abū Ja'far al-Manṣūr. When his heir, 'Uqba ibn Ja'far ibn al-'Ash'ath, rebelled against the Caliph Ma'mūn, his inherited 'iqṭā' was confiscated and was granted by the same caliph to the sons of 'Isā ibn Ja'far.<sup>1</sup> The sources speak of a number of 'iqṭā's granted to individuals occupying no official position such as muhaddiths (traditionalists), poets and singers<sup>2</sup>. During the first half of the third century, especially during the reign of the Caliph Mutawakkil, several 'iqṭā's were granted to many of his subjects, such as his poet, al-Buḥṭurī, the possession of which 'iqṭā' remained in the possession of his heirs until the next century.<sup>3</sup>

The second category of these grants was those 'iqṭā' given in neglected states. This policy was adopted in order to encourage the cultivation of barren or deserted land. The procedure was that the muqṭa' undertook the responsibility and expense of reclaiming the land and to attract peasants to work for its cultivation. He further undertook to supply peasants with seeds and money, and made himself responsible for the clearance and drainage of canals and water courses of the land. In return he was given full title to the granted land which his heirs could claim upon his

---

<sup>1</sup> Khaṭīb al-Baḡhdādī, op.cit., vol. I, p.81.

<sup>2</sup> Ibid., vol. VI p.368. The author of Kitāb al-Aghānī produces evidence that many of the poets and singers received 'iqṭā's, especially during the first half of the third century, A.H. For example, see Aghānī, vol. V, pp. 178-84; vol. XI, pp. 348-9.

<sup>3</sup> Tanūkhī, op.cit., vol. VII, p.28; Ṣabī, op.cit. pp. 163-4, 181-2; see also Ya'qūbī, Bulḍān, p.258; Ṭabarī, Tā'rikh, vol. . . . p.1438; ibn al-Athīr, vol. VII, p.33; also Khaṭīb, op.cit., vol. VI, p. . . . cf. Dūrī, Iqtisādī, pp. 29-30; Miah, op.cit., pp. . . . 241-242.

disease. The owner would pay a yearly sum to the state, but was exempt from any other tax or from official intervention.<sup>1</sup> In the Sawād, this type of 'iqṭā'' seems to have been granted in order to revive the land which had been neglected as a result of rebellions and the ensuing unstable situation in Iraq. The Zang revolt, for instance, caused a large-scale emigration of peasants and cultivators who often fled to save their lives, leaving their cultivations and homes for the greater security of the towns.<sup>2</sup> This latter type of 'iqṭā'' included not only neglected or forsaken land but also waste or devastated land. Sometimes 'iqṭā''s were granted on condition that the mawāt land (sometimes called ghāmīr) would be broken for cultivation and would become liable for taxation after a fixed number of years.<sup>3</sup>

It is worth noting that the term 'iqṭā'' was sometimes used in a different sense. Under certain conditions, no complete right of ownership and inheritance was given, not even the right of beneficiary for a fixed period. In these cases it was probably used merely for title and show. An example of this occurred when the Caliph

---

<sup>1</sup> Qalqashandī, op.cit., vol. XIII, pp. 123-31, 139-43.

<sup>2</sup> Tabarī mentions that, after capturing Wāsiṭ, the Zang advanced as near as Na'māniyya, which was a short distance from Baghdād, and that they captured this city, set fire to its markets and destroyed most of the houses. Then they advanced to Jarjarāya, in the countryside of Baghdād. It is not surprising that most of the cultivators of the Sawād left their lands and fled to Baghdād to save their lives. See Tabarī, Tarīkh, XI, pp. 253-4; Ibn Abī al-Ḥadīd, op.cit., vol. VIII, p.164; ibn al-Aṭhīr, op.cit., vol. VII, pp. 74, 177.

<sup>3</sup> Ṣūlī, Adab al-Kuttāb, vol. III, p.213. Khaṭīb al-Baghdādī, op.cit., vol. VIII, p.493; Isfahānī, Aghānī, vol. X, p.237; Isṭakhri, op.cit., p.82.

Mutawakkil in 205 A.H. (849-50 A.D.) announced his three sons as regents. According to ibn al-'Athīr, he granted each of them as an 'iqṭā' several provinces of the Abbasid state.<sup>1</sup> This does not indicate that either the actual land of the provinces or their produce were conferred upon his sons as their personal property, but that their value lay in the conference of the dignity bestowed on them by the Caliph.

The evaluation of the 'iqṭā' was according to an average, calculated on the basis of an average of the amount of taxes collected during a certain series of years, and was known as "ibra".<sup>2</sup> Professor Cahen suggests that the uses of such an average had existed since the advent of Islam and went back even further, perhaps to Roman times. Moreover, he indicates that the term 'ibra was given, during medieval Muslim administration, to the assessment of the fiscal value of the lands in question.<sup>3</sup> It is not always easy to see how it was established and what its connection was with the taxes actually levied. Full discussion of the 'ibra and a description of the method by which it was generally estimated can be found in various contemporary and later-dated sources.<sup>4</sup>

---

<sup>1</sup> Ibn al-'Athīr, op.cit., vol. VII, p.19.

<sup>2</sup> Khawārazmī, op.cit., p.61; Azdī, Tā'rikh al-Mausil, vol. II, pp. 215-6; Iṣṭakhṛī, op.cit., p.82; cf. Løkkegaard, op.cit., p.61; Bosworth, op.cit., pp. 135-6.

<sup>3</sup> Cahen, 'L'evolution de l'iqṭā'...', Annales, ESC, p.46.

<sup>4</sup> Qudāma, Nubadh, pp. 236-7; Ṣābī, op.cit., p.370; Khawārazmī, op.cit., p.61; Qalqashandī, op.cit., XIII, p.141; cf. Minovi and Minorsky, 'Naṣīr al-Dīn Ṭūsī on finance', BSOS, X (1939-42), pp. 759, 772;

It was resolved by calculating the tax yield of the best productive year, adding to it that of the least productive and halving the total, after collecting prices and providing against any other contingencies which might arise.<sup>1</sup> Consequently, the 'ibra of the 'i-tā was, theoretically at least, the average of tax yield from the land which was granted as 'iqta'.

Practically, as the calculation of such an average necessitated a longer period of time (between 2-3 years), it is difficult to imagine that the collection of taxes should be delayed until such a calculation had been made. By that time the 'ibra might have ceased to correspond to the actual annual produce of the 'iqta', and may have differed quite considerably by the end of the period needed for the standard calculation of the 'ibra.<sup>2</sup> The 'ibra, however, seems to have been changed whenever major changes occurred, whether in prices or in any other conjunctures or factors which were originally taken into consideration at the time of calculation, such as the produce and price level, which played a conspicuous part.<sup>3</sup> The period of time according to which function of each 'ibra took place, seems to have been governed in Iraq by those factors, and since the elements which affected these factors were complicated and varied from time to time, and even from one part of the province to another, the supposition of irregularity of the intervals between each ta'dul<sup>4</sup> and another arises, whereas the cadastral survey

Amedroz, Abbasid Administration in its Decay, pp. 832 ff.; Løkkegaard, op.cit., pp. 105-6; Lambton, 'Reflections...', p. 368; Cahen, 'L'evolution..', pp. 35-6; 'Review of Løkkegaard's Islamic Taxation', Arabica, I (1954), pp. 341 ff; Bosworth, op.cit., pp. 135-136.

<sup>1</sup> Khawārazmī, op.cit., p. 61; Bosworth, op.cit., pp. 135-6; cf. Mūrī, Iqtisādī, p. 189.

<sup>2</sup> Cahen, 'L'evolution de l'iqta' ..', Annales, ESC, p. 46.

<sup>3</sup> Løkkegaard, op.cit., p. 105, no. 134.

<sup>4</sup> Jahshiyārī, op.cit., p. 134; cf. Løkkegaard, op.cit., pp. 179-180.

of Sawadi cultivated land took place at more or less regular intervals. In addition, the 'ibra was not employed to calculate the tax-paying ability of the province of the Sawād as a unit only, but was also used for smaller areas, and, in a few cases, some of the sources speak of the 'ibra of a certain day'a.<sup>1</sup>

During the third century A.H., the sources provide no information concerning any change in the 'ibra or about any ta'dīl, which usually represents an introduction and principal step towards any change in the 'ibra.<sup>2</sup> On the other hand they contain rich information which reflects the instability of the economical life in Iraq as a result of various reasons. In addition, the Zang rebellion (as has already been noted), and the Abbasid confrontation led to the devastation of most of the villages in the Sawad. Reconstruction of the villages later, during the reign of the Caliph Mu'taḍid, in addition to various other reasons, might throw doubt on the effectiveness of the 'ibra, especially during the second half of the third century.<sup>3</sup>

The units used to calculate 'ibra were a combination of three figures representing each individual 'ibra. They were wheat

---

<sup>1</sup> Awdī, in Tā'rikh al Mausil, II, pp. 215-6, mentions the 'ibra of one small dai'a, while Qudama, on the other hand, mentions the 'ibras of both Kūrat dijla and Nahr al-Ṣilah for the year 260 A.H./873-4 A.D.). cf. Løkkegaard, op.cit., pp. 105-6.

<sup>2</sup> Qudama is, in fact, the only author who provides a clear reference to the 'ibra of 204 A.H./819 A.D., and gives the only reference to the 'ibra representing another year. Ibid.; also see chapter VI.

<sup>3</sup> The prices of wheat and barley varied for many reasons, such as high or low flooding of the Tigris and the Euphrates, wars, epidemics,

and barley in kurr measurement and dirhams.<sup>1</sup> In evaluating these units, Qudāma ibn Ja'far clearly states in his calculation of the total value of the 'ibra, that the average value of each combined two kurrs of wheat and barley was 60 gold dīnārs.<sup>2</sup> He states, moreover, that the value of the gold dīnār was equal to 15 dirhams in ordinary currency.<sup>3</sup> The interpretation is, therefore, that the price of one kurr of the juhjundum (i.e. half wheat and half barley) amounted to 30 dīnārs. By applying the value scale of Būzjānī,<sup>4</sup> it is possible to infer that the official price of one kurr of wheat was 40 dīnārs, while that of barley was 30 dīnārs.<sup>5</sup> These prices, however, contradict those listed in Kitāb al-wuzāra.<sup>6</sup> These, as Thronkretz rightly points out, did not

---

stability of the country, whether affected by conflicts, agricultural activities or conditions of transport. For example, see Ṭabarī, Ta'rikh, III, pp. 1066, 1885, 2210; Ṭaifūr, op.cit., p.134; ibn al-Athīr, op.cit., vol. VII, pp. 108, 135, 195; al-Dimashqī, al-'ishārah, p.48.

<sup>1</sup> Qudāma, Nubadh, pp. 236-7; ibn Khurradādhbeh, op.cit., pp. 8-14. In three districts, according to the latter, rice replaced the wheat, while in the other one it was milled. Ibid.

<sup>2</sup> Qudāma, Nubadh, p.237; the term 'Juhjundum', actually used later by Būzjānī, was obviously borrowed from the Persian terminology, which meant barley and wheat. cf. I.A.Valliers, Lexicon Persico-Latinum Etymologicum, I, p.523; A. Siggel, Arabisch-deutsches wörterbuch der Stoff, 1950, p.26.

<sup>3</sup> Qudāma, Nubadh, p.237; Būzjānī, however, states that the value of the dīnār was equal to 12 dirhams. cf. Cahen, 'Documents relatifs à quelques techniques Iraquiennes au début du onzième siècle', Ars Islamica, XV-XVI (1951), pp. 24, 27.

<sup>4</sup> Cahen, 'Quelques Problèmes économiques et fiscaux de l'Iraq Buyide d'après un traité de mathématiques', Annales de l'Institut d'études Orientales, X (1952), pp. 326-363.

<sup>5</sup> The prices given here represent the year 204 A.H./819 A.D. according to Qudāma, Nubadh, pp. 236-7. It is well to note that they changed



represent the typical prices prevailing in Mesopotamia in Ṣābī's time.<sup>1</sup> The prices of wheat and barley mentioned above coincide with the suggestion of Professor Cahen in this respect.<sup>2</sup>

Officially, therefore, the muqṭa' had to pay his dues to either the central or to the provincial treasury, according to the price rate. It is presumable that he was free to pay the amount of the dues in either of these units.

There is no doubt, as Løkkegaard has clearly demonstrated,<sup>3</sup> that the rule of 'ushr had not been conceived as a form of privilege taxation, where the profiteers of 'iqṭā', who collected their own rents at high rates and paid only the 'ushr, were able to make

later. During Būzjānī's time, they were as high as 60 dīnārs for wheat and 30 dīnārs for barley.

cf. C. Cahen, 'Quelques problèmes économiques et fiscaux de l'Iraq Buyide d'après un traité de mathématiques', Annales de l'Institut d'Etudes Orientales, X (1952), pp. 342-3; idem, 'Documents relatif à quelques techniques iraqiennes au début du onzième siècle', Ars Islamica, XV-XVI (1951), p.24; A.S.Ehrenkrantz, 'The Taṣrīf and Taṣ'īr Calculations in Mediaeval Mesopotamian Fiscal Operations', JESHO, VII (1964), p.54.

<sup>6</sup> The Historical Remains of Hilāl al-Ṣābī, ed. H.F.Amodroz (1904), Leydon, p.188.

<sup>1</sup> Ehrenkrantz, 'The Taṣrīf and Taṣ'īr', JESHO, VII (1964), p.55.  
cf. C. Cahen, 'Quelques Problèmes Économique...', AIEO, X (1952), p.49; E. Ashtor, 'Essai sur les prix et les salaires dans l'Empire Califien', ROS, XXXVI (1961), p.31.

<sup>2</sup> C. Cahen, 'Quelques Problèmes...', AIEO, X (1952), p.49.

<sup>3</sup> Løkkegaard, op.cit., p.120 ff; cf. C. Cahen, 'Fiscalité, Propriété, Antagonismes Sociaux en haute-Mesopotamie au temps des premiers Abbassides d'après Denys de Tell-Mahré', Arabica, I (1954), p.141.

a considerable profit. The muqta's themselves suffered in the same way and, in many cases, paid equally high rates as in the other categories of taxation. A double charging of the tithe is known to have been frequently made on one pretext or another; or by a false estimate of the value of the production of the 'iqṭā'. The time came when the 'iqṭā' was not considered to be a privilege and the day'a came to be considered more and more desirable. In the latter part of the third century one of the most effective roles of the 'iqṭā' lay in reclaiming waste land or in the resuscitation of abandoned villages.<sup>1</sup>

Moreover, considerable changes had taken place in the social structure of the Abbasid caliphate,<sup>2</sup> which caused the 'iqṭā' to emerge as one of the main institutions of the state.<sup>3</sup> The over-dominant need of the Abbasid government, especially during the second half of the third century, was for money to finance the operations against the Zang revolt and other crucial problems arose in addition to the payment of al-'uṭ'wāt wal arṣāq. The muqāṭa'a method of tax collecting was therefore adopted in many areas for the convenience of the government.

<sup>1</sup> Duri, Iqtisādī, p.30.

<sup>2</sup> The most striking was in the composition of the military forces of the Caliphate and the increase in the number and power of the Turkish military slave troops, especially noticeable from the reign of the Caliph Mutawakkil onwards, which culminated in the emergence of the Amir al-'Umara in 224 A.H./936 A.D.

<sup>3</sup> Lambton, 'Reflection...', p.364.

Professor Lambton has demonstrated that the balance between the civil and military administrations had been upset, and the money received from the farming of taxes ceased to be sufficient to pay both the army leaders and the troops. With the increasing irregularity of revenue collection by tax farmers, the collection of them became a military practice. These various developments resulted in the new type of 'iqṭā'', which differed in its nature from the old form of 'iqṭā''.<sup>1</sup> Professor Cahen compares this in many respects to European feudalism.<sup>2</sup>

---

<sup>1</sup>Ibid., p.367.

<sup>2</sup>C. Cahen, 'L'evolution de l'iqṭā'...', AESC (1953), pp. 35-6; Lambton, 'Reflection...', p.368.

## Chapter V

### TAXATION

Islamic Jurists differ on the points of view expressed in their various books dealing with the problem of taxation. Some of them affirm that the method of its application had not changed since the rise of Islam. They consider that the Abbasid State invariably followed Islamic religious principles and that taxes were levied accordingly.

The changes in administration which occurred over the years do, however, reflect many aspects of the evolution of Islamic society and of the State.

During the first century of Islam, the meaning of many terms was entirely different from those expressed by the same words in later periods. 'Jizya', 'Kharāj' and sometimes 'Ṣadaqa' or 'Zakāt' were almost synonymous during the early part of the first century but later became more specific in their application to different classes of tax.<sup>1</sup> At one time - as used in the Qur'ān - the term 'Kharāj' meant wages.<sup>2</sup> Omar I, in his correspondence with his 'amil in Kūfa, refers to the "Kharāj land" as 'ard al-Jizya (poll-tax lands).<sup>3</sup>

---

<sup>1</sup> Tabarī, 'Ikhtilāf al-fuqahā', p.22; Yahya, Kitāb al-Kharāj, pp. 10, 39; Ibn Rajab, Kitāb al-istihraj fī aḥkām al-kharāj (MS), fol. 40a-b; Haidar 'abadi, al-wathā'iq al-siasiyah, p.225.

<sup>2</sup> Qur'an

<sup>3</sup> Yahya, op.cit., p.10.

Later, the term Jizya was used in the same sense as kharāj.<sup>1</sup> Sharīk, the Jurist, says that the jizya paid by Ahl al-Kitāb (scripturalists) is kharāj.<sup>2</sup> It is recorded that some farmers of the Sawād requested Omar I to change their taxes from jizya to sadaqa.<sup>3</sup>

Thus the interpretations of these terms as given by the Jurists were not clear to themselves and are misleading. They are not clarified in any of the books of history referring to the first century. It would appear that the various writers did not conceive the idea that many terms were, in actual fact, different and they insisted on giving them wrong<sup>4</sup> interpretations. There must, however, be a distinction drawn between the works of those Jurists who mention only the religious aspects of tax collection and ignore the fact that various administrators, for many reasons, imposed other levies, while other historical writers reflect the differences and instability of tax legislation by the various administrators of the Islamic State. These latter sources are the basis upon which this thesis relies, although the works of the others have not been ignored. Abū Yūsuf, among others, has been the source of much valuable information.

---

<sup>1</sup>Ibid., p.39.

<sup>2</sup>Ṭabarī, Ikhtilāf, p.222.

<sup>3</sup>Yahyā, op.cit., p.42.

<sup>4</sup>EI<sup>2</sup>, Art 'fay'.

The Jurists, in fact, discuss many of the problems which faced the Islamic society during the period of the Prophet and Rāshidūn Caliphate.<sup>1</sup> Levies started in these early days of Islam have been considered by them as legitimate taxes ḡarā'ib Shār'īyyā. With the exception of Abū Yūsuf's work, and a few Iraqi Jurists, belonging mostly to the Hanafet school, all others ignore the taxes which were imposed later, which they term 'illicit' - ḡarā'ib ghair Shār'īyyā. Abū Yūsuf, who was himself a Jurist, prepared his Kitāb al-Kharāj at the request of the Caliph Hārūn al Rashīd.<sup>2</sup> This was designed as a guide to administration and to the correction of unlawful taxation with its practice of illicit collection.<sup>3</sup> The principles of Islam govern its conception concerning taxes. It also contains much valuable information which gives a clear picture of the internal situation of the Abbasid State and its methods of tax levy, especially that gained from the Sawād towards the end of the second century A.H.<sup>4</sup>

Kharāj and 'ushr formed the main land taxes in the period under consideration, the kharāj tax was levied from two main classes of land: a) 'anwa land which included the lands conquered by Muslims and, b) Sulh land which was acquired peacefully.<sup>5</sup>

---

<sup>1</sup> Levy, The social structure of Islam, pp. 159-60; Dūrī, Tā'rikh al-'Irāk al-iqtisādī, p.180.

<sup>2</sup> Abū Yūsuf, Kitāb al-Kharāj, p.2.

<sup>3</sup> Ibid., pp. 2-3.

<sup>4</sup> Ibid., pp. 60, 114.

<sup>5</sup> Shaībani, op.cit., p.24; Ibn Rajab, op.cit., fol. 88b-89a.

Abū Yūsuf says that while the 'anwa lands were in the possession of Muslims, as represented by the Imām (i.e. Caliph), it was the Imām's prerogative to levy kharāj at any rate he chose, and while he levied only such tax as the population could reasonably afford, he had no obligation in this respect. Leniency was by his good-will and in the spirit of Islam and not by any right of the population concerned.<sup>1</sup>

Owners of the sulh lands were rated according to their capacity, in the case of a peace treaty Sulh 'alā qadr al-tāqa, or afū or 'afū. If, however, the peace treaty contained special terms, the tax Shay' musammā was rated at a level according to the terms of the treaty, and the inhabitants paid a fixed yearly tribute.<sup>2</sup>

The 'alā qadr al-tāqa tax was discussed by Løkkgaard who suggests it was assessed "according to the 'utmost' ability, which probably means that the 'afū or fadl (surplus) should be calculated on as high a figure as possible." Moreover, he discussed the origin of this tax and concludes that "'alā qadr al-tāqa was originally connected with a conquest by arms without treaty".<sup>3</sup> Kister rejects Løkkgaard's conclusion and says that the 'afū, fadl and tāqa conception took into consideration the

---

<sup>1</sup>Abū Yūsuf, op.cit., pp. 100-2.

<sup>2</sup>Ibid., pp. 47-8.

<sup>3</sup>Løkkgaard, Islamic taxation, pp. 79-80.

economic changes in the taxpayers' condition and limited the tax-gatherer's demand to a bearable sum.<sup>1</sup> He also refutes Løkkegaard's opinion concerning the origin of this tax and states that "the opposite could be true". He also rejects Løkkegaard's conclusion and says that the people making a treaty would prefer to pay a tāqa tax rather than "'alā shay' in Musammā".<sup>2</sup> Miāh states that "the principle of Kharāj on 'anwa lands and on most of the ṣulh lands was its taxable limits".<sup>3</sup> If, by this somewhat ambiguous statement Miāh implies that the land was taxed to its utmost capacity then his views coincide with those of Løkkegaard. Aghnides considers tāqa as a sum imposed on the taxpayer according to his financial capacity with due regard to those requirements which were necessary for him to continue to ply his trade.<sup>4</sup>

Abū Yūsuf and some other jurists made a distinction between taxes levied on ṣulh land and that on kharāji land.<sup>5</sup> Moreover, Abū Yūsuf states that the Imām could change the amount of levy

---

<sup>1</sup>Kister, The social and political implications of three traditions in the Kitāb al-kharāj of Yahya son Adam, Arabica, p.228.

<sup>2</sup>Ibid., pp. 229-230.

<sup>3</sup>Miāh, The reign of al-Mutawakkil, Thesis, p.245.

<sup>4</sup>Aghnides, Muhammedan theories of finance, p.407.

<sup>5</sup>Abū Yūsuf, op.cit., pp. 40, 100; Qudāma, op.cit., fol. 94b, also Abū Yūsuf, op.cit., pp.100-102.



on the sulḥ ('alā qadr al-ṭāqa) land, but had no right to levy a tax exceeding the paying capacity of the population concerned.<sup>1</sup>

Frequently such land owners preferred to pay according to 'alā qadr al-ṭāqa conditions rather than those of 'alā shay'īn musammā. Under the terms of qadr al-ṭāqa (peace treaty) the affluence or otherwise of the tax payer would be the basis of payment; consideration would be lenient and no hardship would be imposed.

As the term 'alā qadr al-ṭāqa is in itself a 'peace treaty', conditions of payment of tribute based upon it would invariably be more lenient than that imposed upon land won by conquest. The estimated limits of capacity was the considered amount which the taxpayer could be reasonably asked to pay without impairing his own standard of living.

Different views are held by some Muslim scholars concerning the treaty of the town of Ruha (Edessa). They dispute the acceptability of paying standing tribute (sulḥ 'alā shay'īn musammā) rather than that of ṭāqa. They point out that the people of Ruha rejected the terms which they were offered because they were aware that their possessions and capacity would suffer loss by a 'fixed payment' than the amount they would have had to surrender under ṭāqa terms. Others express the opinion that the people were uncertain about the continuance of Muslim rule, and would thus prefer to pay a

---

<sup>1</sup> Abū Yūsuf, op. cit., pp. 100-2.

fixed sum. In all other instances of sulh, however, 'alā qadr al-tāqa' appears to have been accepted which reflects that this basis of payment was preferable to that of 'alā shat' in musammā.<sup>1</sup>

The jizya (poll-tax) was that demanded from each individual under Muslim protection (Ahl al-Dhimma). It is, however, beyond the scope of this thesis to detail the origin and development of this tax.<sup>2</sup>

Taxes in force relating to agricultural life during the 3rd century A.H. (9th A.D.) could be classified as follows:

- a) Main taxes.
- b) Additional taxes.
- c) Extrinsic taxes.

#### Main taxes

These taxes were collected and forwarded to the central treasury of the Abbasid Caliphate. They continued, in addition to taxes on agricultural products, to be imposed on all those items which were legitimately taxable. This, of course, refers to taxes on goods for internal and external trade; on shops, markets, hotels, rents from residential buildings, mills and inherited properties. The indirect effects of some of these taxes influenced the prices charged for agricultural products and brought a small additional revenue to the treasury.

---

<sup>1</sup> Al-Adhūrī, Futuh, p.453; Tabarī, Ikhtilaf, pp. 218-22; Abū Yūsuf, op.cit., p.95; Abū 'Ubaid, op.cit., nos. 141-71.

<sup>2</sup> EI<sup>2</sup>, art. 'Djizya', C. Cahen.

The most effective taxes on agriculture were the kharāj, the 'ushr and the jizya. This jizya, although it had no direct relation to agriculture in theory, in practice it was collected from non-Muslims in villages all over the Sawād area.<sup>1</sup> Thus the jizya affected non-Muslim peasants in the same manner as did all the other forms of tax.

The systematization of main taxes will be discussed in the following pages.

Share-cropping at the rate of 50<sup>o</sup>/o had been part of the kharāj taxation in the Sawād since the reign of the Caliph Maḥdī. This method was devised by his brilliant vizier, Mu'awīa ibn Yasār (d. 170 A.H./786 A.D.), who put it into practice on wheat, barley and other crops cultivated on kharāj land. In addition, he dealt with fruit trees separately.<sup>2</sup> It seems that this rule remained in practice until the end of the 2nd century A.H., although Abū Yūsuf (d. 182 A.H./798 A.D.) advised the Caliph Hārūn al-Rashīd to change it.

Abū Yūsuf suggested that the type of irrigation and the various kinds of agricultural products should be taken into consideration. He told the Caliph that the share would be 40<sup>o</sup>/o in the case of products irrigated by flowing water; 30<sup>o</sup>/o of

---

<sup>1</sup>Abū Yūsuf, op.cit., p.63.

<sup>2</sup>al-Mawardī, al-ahkām al-sultāniya, p.157 (Cairo 1327/1909); Ibn Ṭabāṭaba, al-fakhri, p.164.

those artificially irrigated;  $33\frac{1}{3}\%$  of dates, grapes and other fruits and  $25\%$  of summer produce.<sup>1</sup> It would seem, however, that Abū Yūsuf's suggestion was not followed at that time. Tabarī said that the Caliph Harūn al-Ra<sup>sh</sup>īd applied the rate of  $\frac{1}{2}$  (i.e.  $50\%$ ) and this rate was continued throughout his reign.<sup>2</sup>

In 204 A.H./819 A.D., the Caliph Ma'mūn reduced the rate of the kharāj in the Sawād to  $\frac{2}{5}$  (i.e.  $40\%$ ),<sup>3</sup> but it is doubtful whether the application of this new rate was carried out absolutely as was intended. The Caliph Ma'mūn received many complaints from farmers concerning this matter. One producer, for instance, complained that the entire produce from all his land was insufficient to cover the tax.<sup>4</sup> The Caliph investigated his statement and found that it was true. Another example shows that one farmer was forced to pay yearly a large sum of money in tax as kharāj on his agricultural land. This would, however, appear to be an extortion by one of the officials.<sup>5</sup>

---

<sup>1</sup>Abū Yūsuf, op.cit., pp. 28-9.

<sup>2</sup>Tabarī, Ta'rikh, vol. III, p.607.

<sup>3</sup>Ibid., vol. III, p.1039; Azdī, Ta'rikh al-Muṣul, vol. II, fol. 300.

<sup>4</sup>Abshīhī, al-Mustatraf, vol. I, p.240.

<sup>5</sup>Ibid., I, p.129.

During the reign of the Caliph Wāthiq (227-232 A.H./842-847 A.D.) Ahmad ibn Ḥanbal, scholar and head of the Ḥanbali school, publicly complained that his taxes were unjust and condemned the whole Abbasid tax-collecting regime.<sup>1</sup> Officially, however, the sources referred to the continuation of the Caliph Ma'mūn's rate of 400/o, although it seems to have been only theoretically imposed, particularly as various additional taxes were applied.<sup>2</sup>

The 'ushr tax (i.e. the 100/o) was the illicit tax imposed on the agricultural products of private land (such as milk, etc.) which belonged to individual Muslims. Most of the land in the Sawād surrounding Baṣra was considered as 'ushrī land because it had been reclaimed either by drainage, as in the area of Baṭīḥa, or by washing the silt from it as in the Ṣibākḥ area of Baṣra.<sup>3</sup>

Balādhurī provides information concerning 'ushrī land in the various areas of the Sawād where a huge reclamation movement was begun around Baṣra.<sup>4</sup> This began shortly after Iraq had been conquered and Balādhurī provides a lengthy list of grants "Iqtā'āt" in this area.<sup>5</sup> By most of the sources Kūfa was considered to be kharāj land although Muqaddisī considers it as 'ushrī.<sup>6</sup>

---

<sup>1</sup>Ibn Rajab, op.cit., fol. 34b.

<sup>2</sup>Infra, p.

<sup>3</sup>Tabarī, Tā'rikḥ, vol. III, p.1742; Iṣṭakhri, Masālik, p.280; Ibn Ḥawqal, p.239; Miskawaiḥ, Tajariḥ, vol. III, p.127.

<sup>4</sup>Balādhurī, op.cit., p.413.

<sup>5</sup>Ibid., pp. 414-420.

<sup>6</sup>Muqaddisī, Aḥsan al-taqāsīm, p.133; also, Ṣabī, Al-wuzarā', p.359; Iṣṭakhri, op.cit., p.80.

It would seem that the applied 'ushrī tax differed from the theoretical one. Taxes collected from 'ushrī land varied between 10<sup>0</sup>/o and 25<sup>0</sup>/o of the production, during the last quarter of the 2nd century A.H., according to al-Azdi in his book Tā'rīkh al-Masul.<sup>1</sup> It reached 50<sup>0</sup>/o during the reigns of the Caliphs Wathīq and Mutawakkil, according to the Kitāb al-Istikhrāj fī ahkām al-Kharāj of Ibn Rajab.<sup>2</sup> After the reign of the Caliph Mutawakkil, large pieces of land were granted to Chiefs of the Turkish guards in various parts of the Sawād and in other provinces. Such grants, however, were scheduled to pay 10<sup>0</sup>/o tax, but it is doubtful whether any tax collector had the temerity to ask for taxes, much less to try to enforce the claim. On the other hand, many private lands were abandoned during the periods of the uprisings and revolts.<sup>3</sup> This was perhaps due either to fear and instability, or perhaps to the ruinous cost of irrigation which was the result of wars. The boundaries between most kharājī and 'ushrī lands had been lost with the result that they became merged and were classed as kharāj land. Ṣabī mentioned that many cultivators complained to the vizier 'Alī b. 'Isā that they were taxed for three years at a fixed rate on units of measurement regardless of good or poor production.<sup>4</sup>

---

<sup>1</sup> Azdī, op.cit., vol. II, fols. 238-9.

<sup>2</sup> Ibn Rajab, op.cit., fol. 34a.

<sup>3</sup> Tabarī, Tā'rīkh, vol. III, pp. 1750-2040.

<sup>4</sup> Ṣabī, op.cit., pp. 336-7.

Miskawāhī explains how the agricultural life in Baṣra fell to a low ebb.<sup>1</sup> Naturally, if taxes were levied on the actual land and not on its production, the sum paid as tax (20 dirhams per jarib annually), was an unwarranted burden on land owners, especially during the times when nothing or at best very little, was able to be produced. He says that many landowners found that their production was so low that they were unable to pay the taxes imposed on them.<sup>2</sup>

Although both Ṣābī and Miskawāhī were speaking of the commencing years of the fourth century A.H., their information reflects the situation which existed in the second half of the 3rd century concerning 'ushr tax.

The sadaqa tax seems to have decreased. Qāḍī Tanūkhī tells us that only agricultural products and cattle were subject to this tax.<sup>3</sup> The sadaqa on other sources of income or wealth was paid, according to the conscience of the individual, on a voluntary basis.<sup>4</sup>

Sadaqa was collected by tax collectors together with other kinds of tax, such as kharāj, 'ushr, jizya, etc. Abū Yūsuf requested the Caliph Hārūn al-Rashīd to appoint special collectors

<sup>1</sup>Miskawāhī, op.cit., vol. II, p.128.

<sup>2</sup>Ibid., vol. II, p.128.

<sup>3</sup>Tanūkhī, al-faraj ba'd al-shiddah, vol. II, p.106.

<sup>4</sup>Abū Ya'īn, op.cit., p.99; Māwardī, op.cit., p.109.

for sadaqa only,<sup>1</sup> but it would seem that the request was not granted as the taxes continued to be collected in the same manner. Ahmad b. Yūsuf, the chief tax collector during the reign of the Caliph Ma'mūn, was also responsible for sadaqa collection.<sup>2</sup> There was, however, some sort of segregation made on the yield of sadaqa and an attempt was made to distribute it according to its original inception.<sup>3</sup>

According to Muqaddisī, the yield of kharāj and 'ushr were combined in one total during the reign of the Caliph Mu'taṣim, by his order.<sup>4</sup> This appears to reflect that the two taxes were no longer required to be registered as separate totals. Qudāma excludes only the sadaqa from the Arabs in Baṣra from his accounts and, although he afterwards refers to it separately, he includes it in the final total of revenue.<sup>5</sup> In his official budget for the Abbasid state for the year 306 A.H./918 A.D., the Vizier 'Abī ibn 'Īsa refers to sadaqat of the western lands of the Sawād (Sadaqat arāḍi al-Maghrib).<sup>6</sup> He mentions also "the various markets where sheep were to be sold" (aswāq al-ghanam) in Baghdad, Samarra, Wasit, Baṣra and Kūfa.<sup>7</sup> Iṣṭakhrī<sup>8</sup> later confirms the continuance

---

<sup>1</sup>Abū Yūsuf, op.cit., p.80.

<sup>2</sup>Tanūkhī, al-mustajāḍ min fa'ilāt al-'ajwād, p.251.

<sup>3</sup>Ibid., pp. 251-2.

<sup>4</sup>Muqaddisī, op.cit., pp. 64-5.

<sup>5</sup>Qudāma, Nubadh min kitāb al-kharāj, ed. de Goeje, pp. 237-9.

<sup>6</sup>Kremer, Ueber des Einnahmehudget des Abbasiden-Reiches vom Jahre 306, p.27 ff; Zaidan, Ta'rikh al-tamaddun al-Islamī, vol. II, pp. 109-112, Duri, op.cit., pp. 193-5.

<sup>7</sup>Kremer, op.cit., p.30.



of sadaqa taxation.<sup>1</sup> All these references confirm the existence of sadaqa tax on cattle and agriculture and emphasise the responsibility of the Dīwān al-Kharāj for its collection.

The jizya or jawāli tax seems to have been collected, together with the kharāj in the Sawād, by tax-collectors in each district.<sup>2</sup> It was collected from all male non-Muslims in the Sawād, probably on the same three levels suggested by the jurists. Qudāma speaks of additional taxes relating to jizya payers.<sup>3</sup> Ṭabarī also refers to extra duties taken from jizya payors at the rate of 10% yearly on the estimated value of their residential buildings.<sup>4</sup>

Qudāma stated that the collection of jizya was at the beginning of each new Islamic Calendar year.<sup>5</sup> Baghdād, however, seems to have been the only city in Iraq where separate figures were given by the sources concerning this tax.<sup>6</sup> In all other places, jizya was collected and added to the kharāj. He provides information concerning the total jizya revenue collected from all Muslims in Baghdād at the beginning of the 3rd century. This, he states, was 200,000 dirhams.<sup>7</sup> The amount dropped to 130,000 dirhams.

<sup>1</sup> Iṣṭakhrī, op.cit., p.158.

<sup>2</sup> Abū Yūsuf, op.cit., pp. 63,71.

<sup>3</sup> Qudāma, op.cit., fol. 103a.

<sup>4</sup> Ṭabarī, Tā'rikh, fol. III, p.1390.

<sup>5</sup> Qudāma, op.cit., fol. 104a.

<sup>6</sup> Ibid., fol. 78a.

<sup>7</sup> Ibid., fol. 78b.

in the second half of this century, according to Khurradādhbeh,<sup>1</sup> and collection of the jizya tax from all non-Muslims, able and unable alike, amounted to 16,000 dīnārs (equivalent to about 240,000 dirhams) in the budget of 'Alī ibn 'Īsā, for the year 306 A.H./918 A.D.<sup>2</sup>

#### Additional taxes

Many and varied were the taxes created throughout the Sawād during the first two centuries of Islam. Such taxes covered the yield of every aspect of economic activity. In the next few pages an attempt will be made to clarify the taxing of agricultural produce in the Sawād during the 3rd century A.H.

One important factor is that the yield of these additional taxes was not only for the benefit of the Treasury. Most of them were, indeed, imposed by the collector to cover the payment of his assistants, guards and servants and an additional means of wealth for himself. In some instances there was an agreement between the central government and others, such as tax farmers, mutaqabbils and jahbadhs, to collect taxes. When this was the case, most of any additional collection went into the pockets of the collectors, his guards and assistants.

Abū Yūsuf provides valuable information concerning the additional taxes which were drawn from the Sawād taxpayers during his time. He names many kinds of levy, such as:

---

<sup>1</sup>Ibn Khurradadhbeh, al-Masālik, p.125.

<sup>2</sup>Ibn al-Bitriq, Tā'rikh, p.517; Kromer, op.cit., pp. 27-8.

The <u>ḥadāyā</u> ,	<u>rizq al-‘āmil</u> ,	<u>ajir muddā</u> ,
<u>ihtifān</u> ,	<u>nuzlah</u>	<u>humūlat ṭa‘ām as-Sultān</u> ,
<u>athmān al-ṣuḥuf wal qarāṭis</u> ,		<u>ujūr al-fuyūj</u> ,
<u>ujūr al-Kaiyālīn</u> ,	<u>al-rawāj wal sarf</u> ,	<u>ujūr al-buyūt</u> ,
and	<u>dorāhim al-nikāḥ</u> . <sup>1</sup>	

Other sources mention yet other taxes, such as māl al-jahbadhah, baqāya al-kharāj, al-‘āyn al kusūt, al-takmila, mal al-marafiq, darahim, jund al-‘istiṭṭhāth, the ḥashrīya or ḍarībat al-mawārīth.<sup>2</sup>

The ḥadāya (gifts) was usually given direct to the head of the state and this custom had originated in Persia. Money was collected from the peasants with which to buy gifts for the Persian king during the festivals of nawrūz and mihrijān.<sup>3</sup> It is probable that this tax was collected in cash twice a year. The sources, however, give no indication of how much it was, or at what time of the year. They tell us that it was abolished by the Caliph Omar I.<sup>4</sup> Sa‘īd ibn al-‘Āṣ, the ‘āmil of the Caliph ‘Uthmān in Kūfa restored the custom.<sup>5</sup> It is probable that it remained in force during the reign of the Caliph ‘Alī ibn Abī Ṭālib, while during the reign of the Caliph Mu‘āwīa I it rose to as much as 50 million dirhams.<sup>6</sup> Prior to the abolition of this tax by Omar II,

<sup>1</sup>Abū Yūsuf, op.cit., p.62.

<sup>2</sup>Qudāma, op.cit., fols. 23b-24a; Būzjānī, Kitāb al-hisāb (msc.), Chapter V, part I, fol. 203a.

<sup>3</sup>The nawrūz is the new year festival celebrated at the spring equinox, while the mihrajan was the festival of the autumn equinox.

<sup>4</sup>Jahshiyārī, Kitāb al-wuzarā’ wal-kuttāb, p.11; Ṣulī, Adab al-kuttāb, vol. III, pp. 19-20; Ibn Kurradadhbeh, op.cit., p.128; Muqaddisī, op.cit., p.105.

<sup>5</sup>Ṣulī, op.cit., vol. III, p.219. <sup>6</sup>Ibid., vol. III pp. 219-220.

the sum collected as hadāyā in Iraq was equivalent to the total of all the other taxes.<sup>1</sup> This reflects the serious impact on the life of the peasant population. Abū Yūsuf records that this tax was drawn from land cultivators in the Sawād prior to his time and the practice was probably continued throughout the 3rd century A.H. He opposed it and advised the Caliph Harūn al-Rashīd to abolish it, but without apparent effect.<sup>2</sup>

In the 3rd century A.H., the sources speak in general terms of hadāyā forwarded to caliphs from governors of various eastern Abbasid provinces. Such gifts usually consisted of rare and valuable local craftsmanship.<sup>3</sup> On the occasion of a special celebration on the eve of nawrūz 282 A.H., Abshihī says that the Caliph Mu'tamid was presented with especially valuable gifts.<sup>4</sup> From this it would seem that the tax was being levied at the end of the 3rd century A.H.

The 'aīyn tax covered the surveyors' salaries. Collective bargaining would take place between the surveyor and a representative of the peasants who cultivated the area, concerning

<sup>1</sup> Muqaddisī, op.cit., p.133; Sulī, op.cit., vol. III, p.220; Ibn Rustah, a'laq, p.105.

<sup>2</sup> Abū Yūsuf, op.cit., p.86.

<sup>3</sup> Tabarī, Ta'rīkh, III, p.1706; Tha'alibī, Thimār al-qulūb, pp. 427-8; Abshihī, op.cit., II, p.67.

<sup>4</sup> Abshihī, op.cit., vol. II, p.67.

the salary which would be acceptable to him. This occurred, as a rule, before cultivation was begun and took the form of a tax on averages which was collected and assessed on the actual area of the land cultivated. If his attendance was only required on one occasion, the assessment would be lower than if he were required to visit the area several times. If parts of land were allowed to lie fallow for a period in order to resuscitate it, more visits would be required in order to estimate an<sup>1</sup> average than on the entire cultivated holding.

When a peasant handed a cash payment to the tax-collector, an additional tax, known as the rawāj was imposed on him for each 100 dirhams he paid in this manner and varied according to the greed or otherwise of the collector.<sup>2</sup> The amount was bargained between collector and payer and varied according to the means of the latter. The sum collected was, however, devoted to the benefit of the collector and his assistants.

The rawāj was known under various names. Abū Yūsuf calls it 'al-Sarf'<sup>3</sup> while Qudāma names it 'kifāya' and 'wiqāya'.<sup>4</sup> Ṣabī refers to it as the 'jahdadh's right (ḥaq al-Jahbadh)'.<sup>5</sup>

---

<sup>1</sup>Būzjānī, op.cit., fol. 203a.

<sup>2</sup>Ibid., fol. 203b.

<sup>3</sup>Abū Yūsuf, op.cit., p.62.

<sup>4</sup>Qudāma, op.cit., fols. 20b-21a.

<sup>5</sup>Ṣabī, op.cit., p.255.

It would seem that the 'rawaj' was a precaution to provide against the use of counterfeit money, zuyūf or nabahraj,<sup>1</sup> or perhaps the clipping of money, although the use of parts of dirhams was acceptable at that time.<sup>2</sup>

It is obvious that the taxpayer suffered a great deal, perhaps because he paid the tax direct to the collector and certainly the final amount of these subsidiary taxes was left in the hands of the jahbadh. There was rivalry between many of the jahbadhs to win contracts for collecting taxes in certain areas; as their endeavours to obtain these privileges became more determined, their gifts to the government became larger and, of course, extortions from the peasants were heavier in order to repay themselves for what they had spent on obtaining the privilege, to say nothing of payment for those they employed and some for their own interest on it after the official amount had been covered. It is probable that taxes related to the jahbadh grew unjustifiably heavier year by year. No doubt this is to what Qudāma refers when he speaks of dīwān al-Jahbadha and states "wa tarāqā mā al-jahbadhati ilā Jumlatin wafiratin asl aktharuha 'udwān".<sup>3</sup>

<sup>1</sup>Jāhiz, al-tabassur bi'l-tijārah, p.15; al-bukhalā', p.268.

<sup>2</sup>Maqrīzī, Ighāthat al-Ummah, p.68.

<sup>3</sup>Qudāma, op.cit., fols. 23b-24a; Šabī, op.cit., pp. 277-8.

Yet another tax related to the rawāj was collected from peasants known as the 'rawāj al-rawāj'. Būzjanī defined it as a small sum taken for the payment of the employees of the tax-collector.<sup>1</sup> There was no standard rate for this tax and the amount varied according to the whim or opinion of the chief tax collector (i.e. the 'amil al kharāj', the jahbadh, the dāmin or the mutaqabbil), and the terms he had made with his employees. Probably the rawāj al rawāj is what Abū Yūsuf refers to as 'ujūr al-fuyūj (the salaries of the Fuyūj), fuyūj,<sup>2</sup> according to him, being the local employee of the tax collector.

The sources say that ujūr al-buyūt was one of the many taxes abolished by Omar II.<sup>3</sup> It would seem, however, that this tax was similar to that referred to as nuzlah, which simply means that the food, etc., consumed by the tax collectors and their employees during the period of collection, was at the cost of the taxpayer. This certainly was an additional burden on those who, as Abū Yūsuf comments, "could not and should not bear such a tax".<sup>4</sup> If the taxpayer was unfortunate enough to

---

<sup>1</sup>Būzjanī, op.cit., fol. 203b. He mentions that it was known also as Ujrā and haq al-jahbadh.

<sup>2</sup>Abū Yūsuf, op.cit., p.61.

<sup>3</sup>Ibid., p.86.

<sup>4</sup>Ibid., p.61.

be classed as a dhimmī (non-Muslim) yet another tax related to the nuzla, known as the 'arṣāq', was levied on him. The rate for this seems to have been a fixed one of 15 ṣā' of wheat in the Sawād.<sup>1</sup>

The period allowed for the stay and maintenance of the unwelcome collector and his employees was, according to Qudāma, limited to three days.<sup>2</sup> Ṭabarī states that enforced guests, even such as in the instance of the Caliph Mu'taḍid (279-289/892-902) were not permitted to outstay their stipulated time. From him we learn that Mu'taḍid was asked to leave by the villagers of "ʿāin al-dhirba" at the end of his two-day visit, and even he had to agree to leave the next day.<sup>3</sup>

As if these impositions were not enough, the tax-collector had the right to compel the villagers to attend upon him to learn the extent of the taxation to be imposed upon them, and for this he had to pay an additional fee, ja'l, to the messengers (fuyūj) of the tax-collector for delivering the message. This 'fee' often assumed farcical proportions, and there were occasions when the demand by the messenger exceeded the amount of the main tax itself. If this were the case, the messenger would take part

---

<sup>1</sup>The rate of this additional arṣāq was different in each country. See Qudāma, op.cit., fol. 103b.

<sup>2</sup>Ibid.

<sup>3</sup>Ṭabarī, Tā'rikh, vol. III, p.2199.



and sometimes all, of the capital of the village (if there were indeed any left to take) perhaps driving off a cow or a sheep or whatever he found to take by way of remuneration for his 'services'.<sup>1</sup>

All these payments in addition to that of the salary of the 'amil (rizq al 'amil) were drawn from the tax-payer and Abū Yūsuf appears to have noticed the extreme unfairness of this method. He appealed to the Caliph Harūn al-Rashīd to change it by remunerating the collector direct from the treasury.<sup>2</sup> There is no record, however, that his advice was put into practice. Even the soldiers who helped in collecting the tax (jund al-istiḥṭhāth) were indirectly paid by the tax-payer.<sup>3</sup>

Upon cultivators, who paid their taxes in kind, it was not difficult to find a pretext for imposing additional levies. There were those known as "ujra mudda", "ujūr al-kayālān" and "ziyādat al-sanja".<sup>4</sup> 'Ujra mudda' comprised the cost of hiring the scales and weights; 'ujūr al-kayālān', the salaries of those who measured and weighed the products, while the 'ziyādat al-sanja' appears to be the difference in weight or measurement

---

<sup>1</sup>Abū Yūsuf, op.cit., p.61.

<sup>2</sup>Ibid., pp. 61-2, 115.

<sup>3</sup>Ibid., p.61; Qudāma, op.cit., fol. 96a.

<sup>4</sup>Abū Yūsuf, op.cit., p.62.

between those crops left to dry as opposed to that of the freshly gathered produce. Abū Yūsuf appears to be fully aware of the unfair load of taxes borne by the payers and insisted that the charges for the first two of these taxes - the yield of which was the prerogative of the state - should be borne by the government, and that the third tax should be completely eliminated.<sup>1</sup> There is, however, no record to show either the acceptance or rejection of his advice.

There seems to have been no end to the number of ways in which the taxes were imposed. There were, in addition, the iẖtifān, the nā'iba and the qisma,<sup>2</sup> all of which were probably related to the portion of crops taken from peasants as 'perquisites' by the tax-collector's employees and their relatives who attended when the crops had been harvested and were ready for division. This custom, though to a modified extent, exists in Iraq at the present time.

The collective share of the produce of the treasury was stored temporarily in the villages until the final collection had been made and before its transfer to the kharāj storehouses (makhāzin al-kharāj). Cultivators had to pay the rents of both temporary and permanent storehouses in the Sawād. The transportation costs for the treasury's share of the crops

---

<sup>1</sup> Qudāma, op.cit., fol. 93b.

<sup>2</sup> Abū Yūsuf, op.cit., p. 62.

was also collected from the peasants. This cost was known as "Humulat ta'am al-Sultān".<sup>1</sup>

Nor did the costs of writing materials used during the transactions escape payment by the peasants. The sources refer to "'athmān al-ṣuḥuf wal qarāṭīs" which was the value of these materials, registrations and receipts during collection and perhaps also for dīwān al-kharāj.<sup>2</sup> Before the use of paper became wide-spread, the best and most used material was papyrus al-qarāṭīs imported from Egypt.<sup>3</sup> As the clerical work of taxation grew, there was increasing expenditure on material of this kind, especially in the dīwān al-kharāj and large quantities were imported and stored against possible interception of trade for one reason or another. Papyri imported into Iraq was costly.<sup>4</sup> For example, that used in dīwān al-Sawād alone during the reign of the Caliph Mu'taḍid, was estimated at 7,000 dīnārs monthly and the price of a single piece was one dirham.<sup>5</sup> In times of shortage even more costly was the white leather which was used for writing purposes and documents, in addition to the cheaper material of the paper which was produced in Iraq and imported

---

<sup>1</sup>Ibid.

<sup>2</sup>Ibid., pp. 86, 109.

<sup>3</sup>Jāhiz, al-Tabassur, p.30; Tha'alibī, Thimār al-qulūb, p.431.

<sup>4</sup>EI<sup>2</sup>, art. 'daftar', B. Lewis.

<sup>5</sup>Ṣabī, op.cit., p.37.

from Samarqand.<sup>1</sup>

Ibn al-Faqīh refers to two kinds of writing paper produced in Baghdad, 'al-dārish' and 'al-lakkā'. The Caliph Mu'tasim, he tells us, tried to plant the papyri plants in his new capital "Samarra" and his failure in this matter.<sup>2</sup>

The total value of all writing material used by tax-collectors and probably by dīwān al-kharāj had to be drawn from tax-payments. The sources provide no evidence of the amount of this tax nor how it was collected. It is possible that the estimated value was shared proportionately between all tax payers.

There was also the cleaning of pollution ('ujūr Karī al-anhār) from the canals, and the repair and strengthening of banks and dams (al-'imāra) for which the tax-payer had to pay;<sup>3</sup> and even marriage and death were not free from the interference of the tax-collector. There was the darahin al-nikāh (marriage tax)<sup>4</sup> to which Abū Yūsuf refers, and which seems to have been collected from peasants in the Sawād during the Umayyad period. Omar II abolished it, but it is doubtful whether his order was carried out effectively.<sup>5</sup> The sources neither clarify the amount

<sup>1</sup>Th'ālībī, Thimar, p.431.

<sup>2</sup>Ibn al-Faqīh, Buldān, p.253.

<sup>3</sup>Abū Yūsuf, op.cit., p.55; Qudāma, op.cit., fol. 90.

<sup>4</sup>Abū Yūsuf, op.cit., p.86. cf. 'Arūs Resmi', EI<sup>2</sup>, s.v.

<sup>5</sup>Ibid.

of the tax nor how it was based. Its name implies that it was taken on the occasion of a peasant's marriage. There appears to be a parallel to this in the feudal system in Europe during the Middle Ages, when there were many records made of cases when the great landowners refused the right of marriage to a small tenant. Also in the years preceding the French Revolution, peasants were required to pay a tax if they desired to marry.

When death came to a farmer his property was transferred to the custody of the central treasury, al-Sultān waliu man lā waliya lahu yarithahu wa ya'qilu 'anhu, and was known as al-hashriya. When, in the second half of the 3rd century A.H., a new tax, daribat al-mawārith, was collected from the inheritor, a new diwān was established especially to deal with it.<sup>1</sup> Ṭabarī states that this tax was abolished during the reign of the Caliph Mu'tadid, while Ṣabī says that both the Caliphs, Mu'tadid and Muktafi, abolished it.<sup>2</sup> It was, in actual fact, continued, as it is spoken of by Ibn al-Mu'tazz in one of his poems.<sup>3</sup>

In 306 A.H./918 A.D., the vizier of the Caliph Muqtadir, Hamid ibn al-'Abbās, reaffirmed it officially.<sup>4</sup> The hashriya was,

<sup>1</sup> Qurtubī, Bidayat al-mu'tahid, vol. II, p.346; Ṣabī, op.cit., p.270; 'Araib, Silat tarikh al-ṭabari, p.118.

<sup>2</sup> Ṭabarī, Ta'rikh, vol. III, p.2151; Ibn al-'Aḥḥār, Kāmil, vol. VII, p.172; Ṣabī, op.cit. p.268.

<sup>3</sup> Diwān ibn al-Mu'tazz, vol. I, p.131.

<sup>4</sup> Ṣabī, op.cit., p.270; 'Araib, op.cit., pp. 115-6.

however, collected continuously in Iraq during the 3rd century A.H. According to Taifur, the total sum of the hashriya collected from the area of Basrah in one year, during the reign of the Caliph Ma'mūn, was 300,000 dīnārs.<sup>1</sup> The Qadīs seem to have been the persons responsible for collecting this tax.<sup>2</sup>

The kusūr was yet another imposition, but the purpose of it is not clear.

Takmila was a tax imposed collectively upon an entire village or district. In the event of the absence or the death of one or more payers of this tax, the entire amount would be paid by the community who would share the additional burden of the absentees. The term kusūr al-kharāj or inkasara al-kharāj were used by Azdī. He refers to it when the situation was less than usual for any particular reason.<sup>3</sup> Zaidan suggested that the kusūr represented the difference between the present and the ancient system of kharāj taxation, which remained in use during the period prior to the Abbasid caliphate. This was based on land measurement, "masāhat al-Jurban", and the system which was based on share-tax, "muqāsama". Some cultivators, he claims, preferred to pay according to the old system. If they

---

<sup>1</sup>Taifur, Rehda, p. 227.

<sup>2</sup>Ibid., p. 222; Sūlī, al-'awraq, p. 104.

<sup>3</sup>Ib.

<sup>3</sup>Azdī, op.cit., vol. II, fols. 238-9; Nuwairī, op.cit.,

<sup>3</sup>Az vol. VIII, p. 252.

vol. VIII, p. 252.

were able to pay only part of the tax, the balance left would accumulate year by year in spite of the efforts made by the tax-collector to clear it. Zaidan, however, gives no source from which this suggestion was taken.<sup>1</sup>

It would seem that the kusūr was connected with the method of collection in the Sawād. If the peasants were unable to pay the standard amount required on the average of collection (awsat al-‘ibar) any balance left in one year would be requisitioned in the next as a separate item and would not be added as part of that year's tax. This would appear to be a direct contradiction of the statements by Abū Hanifa.<sup>2</sup>

The sources refer to "daribat al-marā‘ī" as that tax required from farmers using pasture land for their cattle.<sup>3</sup> During the Umayyad period, such land was considered as common property. No information is, however, provided by the sources concerning its assessment or collection.

From ancient times and indeed, even in the present day, the first growths of wheat, barley, etc., were cut back in order to strengthen the plants. This practice not only made the yield more prolific, but it provided additional fodder for the cattle.

---

<sup>1</sup> Zaidān, op.cit., vol. II, p.121.

<sup>2</sup> Qudāma, op.cit., fol. 94b.

<sup>3</sup> Abū Yūsuf, op.cit., pp. 30, 40; Šabī, Rasā'il, p.138. This additional tax seems to have been continued until the year 379/989, see Ibn al-‘Athīr, op.cit., vol. IX. p.48; Miskawāh, op.cit., vol. II, pp. 71-2.

It may have been from this source of produce that this particular tax was drawn.

Bee-keepers among the villagers were taxed on the honey from their bees - daribat al-nahl - to what extent is not known.<sup>1</sup>

Regular fishermen were taxed upon their permitted fishing stretches, and this was called "daribat al-masa'id".<sup>2</sup>

#### Methods of Assessment and Collection

The rate of taxation practised during the time of Omar I is usually recognised by the sources as the basis of taxation in Iraq. Omar I appointed two governors to assess the yield and the amounts of tax were based on their recommendations. These were based on the Persian wazifa, which was a balance between share-tax (muqasama) and a fixed revenue, muqata'. The Sassanians practised both muqasama and wazifa in Iraq, and preferred the latter as it was more practical and convenient.

'Uthman ibn Hunayf and Hudhayfa, the 'amils of the Caliph Omar I in the Sawad, assessed the Persian wazifa with justice and equity. Before putting their assessment into practice, Omar I assured himself that their opinions were well-considered and within the scope of production. Both Governors were confident that they had calculated correctly and, indeed, cultivators

<sup>1</sup>Abu Yusuf, op.cit., p.40; Sabi, Rasa'il, p.137; Qudama, Kharaj, fol. 100a.

<sup>2</sup>Qudama, op.cit., fol. 138a. Qudama stated that 'arzaq al-'Umana' 'ala hifz al-ghillat' was another duty in the Sawad, fol. 90b.



had been consulted before submitting the final assessment and were actually able to meet the demands, even when the assessment doubled.<sup>1</sup> The Sawād was, in fact, the first and only province where the land was measured and surveyed and the details of taxable units were recorded.

The sources provide many varied pictures of the assessment approved and enforced by Omar I. No less than twenty variations occur, some of which agreed in part, but most differed in actual detail. (See App. p. 271 ).

It is beyond the scope of this thesis to present the detailed rates in existence during Omar I's reign. The difference in the views related to the assessment, may have been recorded erroneously or perhaps deliberately. Omar's practical assessment in the Sawād must have changed with the years, and perhaps not always practised with the equity and justice with which they were begun. The survey was made during the Umayyad period and perhaps the sources themselves were not allowed a clear picture of the beginnings and presented their information according to their own special conception.

If this were not so, then the years of Omar's reign must themselves have brought considerable changes; not only the methods of irrigation may have differed, but also the methods, perhaps, of transportation. Added to this, lands of equal size may have been near to or far from the final destination of their produce, or the

---

<sup>1</sup>Abū Yūsuf, op.cit., pp. 37-8, 84-5.

land lay nearer to an approved route such as by river or canal, while a similar sized piece of land lay across country with neither adequate road nor waterway. It may have been that differences of this kind were responsible for the differences given by the sources.

Balādhurī, in his Futūh al-buldān, takes a similar view when he discusses agricultural taxes during the reign of the Caliph 'Alī ibn Abī Ṭalib,<sup>1</sup> as new measures were introduced by him. In both Omar I and 'Alī's bases of taxation, the tradition of Islam can be traced, although from different points of view. Omar I, who lived in Medina, was not as conversant with the life and problems of agricultural people in Iraq as was the Caliph 'Alī, who, after having moved his capital to Kūfa, tried to approach them in a more practical manner. Sources speak of 'Alī's common-sense measures to restore the balance of payments to a more just scale than those imposed on peasants hitherto;<sup>2</sup> Balādhurī, for example, refers to the gradual changes made in taxes (al-tusūq al-mukhtalifa) which took into consideration the importance of land marketing and the distance of transportation of produce.<sup>3</sup>

This more just and flexible manner of assessment was practised also in the Sawād during the Umayyad period, when lands were again

---

<sup>1</sup>Balādhurī, op.cit., pp. 378-9.

<sup>2</sup>Ibn Abī al Ḥadīd, Sharḥ nahj al-balāgha, vol. XVII, p.70.

<sup>3</sup>Balādhurī, op.cit., pp. 378-9; Qudāma, op.cit., fol. 100b; Qummī, Ta'rikh-i Qum, pp. 101, 112, 122. cf. Bosworth, op.cit., pp. 132-3.

measured by the Governor, Ziyād b. Abīh; and also during the reigns of the two first Abbasid Caliphs, which benefitted the Treasury also. A complete survey necessary to such a change required tremendous effort and employed a vast number of people.

During the reign of the Caliph Maḥdī (159-168/775-85) the assessment of wazīfa was replaced by the method of muqāsama. It was Mu'awiya ibn 'Abdullah b. Yaṣār, the brilliant author who was also the Vizier of the Caliph Maḥdī, who reverted to the muqāsama method of assessment, which had been practised in a more simplified way by the Prophet in the case of Khaibar.

Maḥdī's vizior, the author of the first Book of the Kharāj, created a uniform system of taxation.<sup>1</sup> He refers in his book to the hardship suffered by the tax-payer when a fixed sum of money or a specified sum of money was imposed on each jarīb of land (i.e. masāha), which protected the Treasury against fluctuation in prices, but if it rose a little, whereby the tax-payer could receive benefit, perhaps the Imām would not allow him to do so. In addition to this injustice, if prices fell and the tax-payer suffered a loss, the Imām was not permitted to compensate him for that loss because this would have reduced the revenue thereby causing damage to the Government. Revenue was always needed for payment of the army "U'tiyāt al-jund" and the other expenditure of the state (Sā'ir al-naḥaqāt).<sup>2</sup>

---

<sup>1</sup>Ṭabarī, Tā'rikh, vol. III, pp. 493, 522; Qudāma, op.cit., fol. 101a.

<sup>2</sup>Abū Yūsuf, op.cit., pp. 13, 63, 71, 113, 125; Qudāma, op.cit., fol. 101b.

Mu'āwīya b. Yasar, therefore, proposed that it would be preferable to tax the people of Sawād according to the precedent of the Prophet in Khaibar. This was ~~that~~ the land was restored to its owner on condition that half of the crop was surrendered as "share-tax". Expenditure on irrigation should be taken into consideration thus: if a landowner watered his soil by means of a bucket, he would be liable for only one-third share of his produce. If irrigation was by the water-wheel method, then only one-quarter share should be claimed. When irrigation expenses had been met, then the farmer should be free from further expense until the harvest and removal of crops, when a proportional share of straw would be taken on account of the share-tax, or resold to him at an agreed price, if so desired. Mu'āwīya b. Yasar also advised that the assessment of the tax on vineyards and other trees, vegetables and crops in general should be carried out fairly. The net income, after deduction of expenses had been made, should be calculated as should the distance from market or port. The demand for tax should take into consideration all these and other costs, charges and expenditure. From the provisionally assessed net income, half of the share-tax (ṭasq al-'astān) should be taken on account until the final assessment was able to be made. If it then appeared that the net income was liable for twice as much as had been taken into account, then the latter amount should be considered to be the full tax and collected. If, however, the net income was actually less, then the final full-share tax should

be proportionately reduced.<sup>1</sup>

The advanced thinking of Mu'āwīya's muqāsama ( assessment system) was accepted by the Caliph Maḥdī and was officially put into practice.<sup>2</sup> Later, however, during the reign of the Caliph Ḥarūn al-Rashīd, it would appear that the old taxation methods (the wadīfa) were still in practice in the Sawād. If this were not so there was no need for Abū Yūsuf's repeated advice to abolish the wazīfa in the Sawād or for him to advise the Caliph in favour of muqāsama.<sup>3</sup> In addition, in his Tā'rikh al-Musul, Azdī mentions that Yaḥya, the Barnacid, the Vizier of the Caliph Ḥarun al-Rashīd, used the method of wazīfa assessment by taxing according to the units of land measurement.<sup>4</sup>

The ta'dīl or ta'dīl al-kharāj can be defined as re-assessment of the agricultural taxes. It took into consideration the changes which had happened after previous assessment had been improved.

It may have happened that roads or waterways had been improved during the time between. The produce may have improved in quality and yield. Perhaps another market had opened on a route easier for transport, or even at a less distance from the place of cultivation. Justice decreed both for government and producer that a

---

<sup>1</sup> Qudāma, op.cit., fol. 101a.

<sup>2</sup> Ibid., fol. 101b.

<sup>3</sup> Abū Yūsuf, op.cit., pp. 28-9.

<sup>4</sup> Azdī, op.cit., vol. II, fol. 238-9.

further appraisal of values would be necessary. The sources, however, mention that the ta'dīl occurred regularly once in every ten years in Egypt.

At the beginning of the Abbasid period, the Caliph Abū Ja'far al-Mansūr appointed Hammād al-Turkī as supervisor of the ta'dīl in the Sawād.<sup>1</sup> It seems, however, that this method continued during the reign of the Caliph Maḥdī, but there is no information as to how long the period was between one ta'dīl and the next, or whether it continued during the third century. It is probable that as this ta'dīl was related to agriculture, the sources, unfortunately, are silent on this point - or at any rate do not consider it worth mentioning. Sometimes the abra is mentioned by them, relating to a certain year as, for example, in the case of Qudāma, ibn Ja'far, when he provides a register for the year 204 A.H.<sup>2</sup> This seems to reflect that it was more likely that the ta'dīl was continued in practice during the 3rd century, although it would seem that it was not applied throughout the whole Sawād at one time. This may be one of the reasons why the average of collection (i.e. abra) for various districts at different times was entered on one list of collection.<sup>3</sup>

---

<sup>1</sup>Jahshiyarī, op.cit., p.134.

<sup>2</sup>The figures corresponding to both kūrat dijla and nahr al-silah areas in Qudāma's book were representative of the 'ibra of the year 260/873, while all other figures were representative of the 'ibra of the year 204/819. Qudāma, Nubadh, pp. 236-7.

<sup>3</sup>Ibid.

Many ways of collecting taxes seem to have been used in Iraq. during the 3rd century A.H. There were qabāla and damān, in addition to the ordinary methods employed by official collectors of the diwān al-Kharāj.

Another, but unusual method, was also adopted, though only during crises. At such times, official employees, especially military officers, were directed to collect their own salaries from cultivators in the Sawād as part of the cultivators' tax.

The qabāla was an undertaking by a local and notable mutaqabbil to pay the full tax quot. of the entire local community or district.<sup>1</sup> This was assessed by the method of muqāṭa'a and was adopted for the purpose of raising revenue rapidly for the convenience of the government.

Although Abū Yūsuf recognised the method, he appealed to the Caliph Harūn al-Rashīd to abolish it both from the Sawād or from any other part of the state.<sup>2</sup> He realised that the mutaqabbil, more often than not, acted fully in his own interest. He wrote that "... they robbed the tax-payers by imposing on them that which they do not owe and punish them in a repulsive manner to secure their own profit."<sup>3</sup> He accepted the method of qabāla in cases of necessity, but recommended control of the activity of the man

---

<sup>1</sup>Lambton, 'Reflections on the 'Iqṭā'', p.363.

<sup>2</sup>Abū Yūsuf, op.cit., p.60.

<sup>3</sup>Ibid.

who accepted the post (i.o. the mutaqabbil). The controller should be the Imām's representative whose salary should be paid from the central treasury, and also that continuous supervision of the director of the barid of the district or province, should be given.<sup>1</sup> These remarks of Abū Yūsuf reflect the existence of the practice of assessment by muqāṭa'a before the beginning of the 3rd century A.H. The higher officials of the Abbasid state knew well that the qabāla method of collection held many disadvantages for the cultivator and the peasant, and even - in the long range - for the ultimate interest of the state and the entire economic life of its society. Ṭaīfūr, for example, states that Ṭahir b. al-Ḥasan, the former military leader of the Caliph Ma'mūn and his 'āmil in Egypt and Syria, also afterwards in Khurāsān, refused to grant qabāla to an applicant. He wrote an annotation that the qabāla was corrupt and even if it were not so, the applicant himself was corrupt.<sup>2</sup> By this it would appear that his views on the matter coincided with those held by Abū Yūsuf. When the inhabitants of a village had agreed on an amount to be paid to the government, they appointed a representative as mutawabbil. This office would only be accepted by him for the one particular occasion. The government would accept this mutaqabbil

---

<sup>1</sup>Ibid., p.114.

<sup>2</sup>Ṭaīfūr, op.cit., p.127.



providing his status in the village were sufficient to make him acceptable as a guarantor.<sup>1</sup> When a fief-holder or head of a village agreed to pay a definite sum of money either to the central treasury or to the local authority, it would be on condition that no 'amil or tax-collector would set foot on their lands. This arrangement, in fact, assured an acceptable payment of taxes and guaranteed land-owners against the extortions of a tax-collector or mutaqabbil.

The sources frequently refer to an assessment by the method of damān. Such was the competition to secure the post of damān (tax-farmer) that prior to any appointment being made an auction for the disposal of the post would be held, probably at the local administration centre. The auction would be attended by many men desirous of obtaining the post, each offering greater inducement than the other in order to acquire it. The one who offered the most was the fortunate candidate and he was appointed as dāmin. A contract would be made between him and the government, and he would be authorised to make tax-collection on its behalf. The contract, which was usually in force for one lunar year, gave the tax-farmer great power. The method was practised during the reigns of earlier Abbasid Caliphs and gradually grew stronger. In the time of the Caliph Harūn al-Rashīd, tax-farming had become common practice.<sup>2</sup>

---

<sup>1</sup> Abū Yūsuf, op.cit., p.60.

<sup>2</sup> Lambton, op.cit., p.365.

The dāmin is frequently mentioned by the sources and reflects the continuation of the practice during the 3rd century A.H. For example, the Qaḍī Tanūkhī mentioned that the Caliph Ma'mūn checked the fulfilment of the dāminūm's obligations.<sup>1</sup> Both Ṭaifūr and Ibn al-Faḡīh provide similar information. Such measures continued until the death of the Caliph Mutawakkil when, in the second half of the 3rd century, a financial crisis faced the Abbasid government.<sup>2</sup>

The dāmin had to pay the full amount in advance, or sometimes part of it in the beginning of each month to allow the government to cover its expenditure. In one case the dāmin promised to provide the central government with daily payments to cover the urgent daily needs for expenditure. This happened in the case of the dāmin Ahmad al-Ṭā'ī who had won a contract for tax-farming of a part of the Sawād, when a financial crisis faced the Abbasid government. This occurred in the early days of the reign of the Caliph Mu'taḍid.<sup>3</sup>

Towards the end of the 3rd century, high officials began to find that the post of dāmin was profitable. They took advantage of their position to combine it with the collection by dāman thus acquiring

---

<sup>1</sup>Tanūkhī, Mustaḥḥad, p.156.

<sup>2</sup>Ṭaifūr, op.cit., pp. 99, 222, 224; Ibn al-Faḡīh, op.cit., p.270; Ibn 'īyas, Ta'rikh Miṣr, p.36.

<sup>3</sup>Ṣābī, op.cit., pp. 13-15.

considerably greater power. If the official were, himself, the vizier with the additional right to collect tax as dāmin, his ability to extort from the tax-payer would be unlimited. He could place an embargo on imported produce, thereby compelling the local population to repurchase their own produce from him at an impossible price.

For example, Ḥamid ibn al-‘Abbās, the vizier of the Caliph Muqtadir (295-321/907-939 A.D.) who also acquired the power of tax-farmer (dāmin) for the taxes in the Sawād, Ahwaz and Isfahān and paid an instalment of his dāman to the treasury from his own resources. He not only extorted the second payment from the taxpayers in addition to the first, but added an enormous sum which he considered to be "proper" for his own profit. He allowed no wheat or barley to be imported into Iraq from other provinces and, as a consequence, prices of foods soared beyond the reach of working people. With commodities at high rates it became impossible to live or to buy the necessities of life. Thieving and famine were the natural outcome, and revolt by the peasants followed. When military revolt was added to the general confusion, the position was reported to the Caliph. He cancelled the dāman contract and the Vizier was dismissed.<sup>1</sup>

Another method of tax collecting is mentioned by the sources as having been practised in the Sawād, as has already been stated,

---

<sup>1</sup> Ibid., pp. 39-40, 108-110; ‘Araṭb, op.cit., pp. 79, 84-5; Miskawāh, op.cit., vol. V, pp. 59-60, 73-4; Ḥamza al-Isfahānī, Tā’rikh, p.130.

during the unstable period following the murder of the Caliph Mutawakkil. The treasury at that time had become very low. The officers of the Turkish guards had imburged themselves from the revenue which arrived in the capital, but there was no money left to pay the rank and file of the army. The soldiers were given permission to take the money due to them from the peasants of the Sawād.<sup>1</sup> This was disastrous, as a far greater amount than the salaries due to them was extorted from the peasants. The soldiers imposed themselves on the people, remaining as unwanted guests for a considerable time. This period caused considerable alarm among the inhabitants who had become virtually the servants of the soldiers, and were ordered by them to perform menial tasks in their own homes.

At about this time the Zang revolt occurred and the military power was forced to unite in order to face it. No repairs to waterways, to broken banks or roads had been made. Fear and extreme poverty caused the villagers to abandon the land and flee to the cities or military centres; and so this method of tax collection by soldiers came to an end.<sup>2</sup>

This period of tax-collection for their own ends should not be confused with that when soldiers were employed to help in tax collection.

---

<sup>1</sup>Yā'qūbī, Tā'rikh, II, p.606; Ibn Ṭabāṭabā, op.cit., p.242; Miskawāh, Tajārib, vol. V, p.265, for example.

<sup>2</sup>Ṭabarī, Tā'rikh, XI, 203-4.

The direct method of collection in the Sawād was by means of the central dīwān al-kharāj, which also had its branches in the districts. In the early days of the Abbasid regime this way of collection was used and was similar to, and indeed a continuation of, the previous method. Later the methods of daman and qabāla were used, but the actual supervision of the whole operation was by dīwān al-kharāj.

The ʿamil of the kharāj was responsible for the supervision of the collection in a province. He usually had a considerable number of official employees to help him in his work. In the Sawād in particular, the post of ʿamil al-kharāj assumed special importance and the viziers and even the caliphs took special care of that. They sometimes intervened in its problems in person, as well as in the administration of dīwān al-kharāj in order to maintain a certain standard of efficiency.<sup>1</sup>

The ʿamil of the kharāj depended on his assistant and employees, and especially on the village chief - the dihqān - for his local knowledge. The dihqān's main function was to collect the taxes, a task which, because of this knowledge he was enabled to do more efficiently.<sup>2</sup> Tabarī says that preference for the employment of the dihqān was because of their understanding of the country and people.<sup>3</sup> He quotes Ubaidullāh ibn Ziyād as describing their usefulness not only because of their experience in this respect, but

---

<sup>1</sup> Azdī, op.cit., II, pp. 215-6; Aghānī, X, p.58; Tabātabā, op.cit., p.198; Tanukhī, Mustajād, p.251; Dimashqī, al-ʿishāra ʾilā nabaḥsin al-tijārāh, p.84.

<sup>2</sup> Lambton, op.cit., p.359.

<sup>3</sup> Tabarī, Ta rikh, VII, p.29.

as a matter of diplomacy and that greater control could be exerted over them. Ibn Ziyād felt that they were more loyal and less aggressive than the Arabs.<sup>1</sup> This information clarifies the advantages and perhaps the more subtle policy of appointing the dihqāns who were of Persian origin, in assisting the collection from each village. There is no doubt that Persian knowledge and experience was exploited, and that their great understanding of the many branches of cultivated produce and its collection was most valuable. This diplomatic move helped to prevent many mistakes of ignorance on the part of Arabs and the consequent misunderstanding which may have perhaps resulted in clashes with the peasants, through lack of experience in such matters. Moreover, the Arabs found themselves with more leisure which enabled them to concentrate on military efforts during Umayyad times, and on politics during the Abbasid period. If any cases of dissension arose among the cultivators and peasants against the collectors, the culprits would appear merely as supervisors and controllers and the supporters of the peasants against oppression. This was, in fact, why there was no revolt against the Arabs until the second half of the 3rd century, when they became less diplomatic and began to establish greater wealth and vaster lands for themselves, and foolishly discarded the dahqāns. This showed them in another light and roused the anger of the population against them, particularly on the western side of the Sawād and in the area around Baṣra.<sup>2</sup>

---

<sup>1</sup>Ibid.

<sup>2</sup>Ibid., VI, pp. 180-1; Ibn al-Jawzī, al-Muntazam, vol. V, p.56.

In those cases where the cultivated lands needed measuring for the purposes of tax-collecting, as in the case of the wadifa method of assessment, the strengthening of dams, banks and maintenance of weirs; or in the cases of argument between different cultivators about the proportion of irrigation used, the local officials sought the help of the central Diwān al-Kharāj. A specialist was usually instructed to investigate the case, to settle the dispute and was empowered to make any necessary decisions.

The central diwān al-kharāj in the capital, which administered tax revenue, appears to have remained stable from Ma'mūn's reign until the year 289 A.H./901 A.D., when the Caliph Mu'tadid reorganised it.<sup>1</sup> During the first part of the 3rd century A.H., diwān al-kharāj consisted of eight departments (majlis), three of which were for the purposes of correspondence.<sup>2</sup> Majlis al-hisāb was established for the purpose of counting the revenue and checking it with other sections of state administration.<sup>3</sup> Majlis al-Jahbadha dealt with tax collection matters. The responsibility for its efficiency was given to the appointed head of the section known as Jahbadh.<sup>4</sup> He was expected to supervise the collection of the

<sup>1</sup> Ṣabī, op.cit., p.148.

<sup>2</sup> Majlis al-'inshā' wal-tahrīr, majlis al-naskh and majlis al-askudār were responsible for writing, revising and transcribing the correspondence. Jahshīyārī, op.cit., p.199; Qudāma, op.cit., fol. 15ā.

<sup>3</sup> Qudāma, op.cit., fol. 2a.

<sup>4</sup> Jahshīyārī, op.cit., pp. 220-1; Tanūkhī, al-faraj ba'd al-shiddah, vol. I, pp. 39-40.

kharāj and other taxes from each of the provinces.<sup>1</sup> The majlis was also responsible for assuring the correct collection of revenue and checking its arrival at the central treasury.

Majlis al-Jaīsh supervised the correct allocation of the revenue to the diwān al-Jaīsh (military section).<sup>2</sup>

Majlis al-tafsīl was responsible for checking details of each type of revenue arriving at the diwān al-kharāj and for comparing them with the official average of the assessment 'abra', and also for the supervision of the specialists employed for various purposes.<sup>3</sup>

Majlis al-asl administered and controlled another department of the Diwān. This incorporated the registration of all kharāj lands and their estimated revenues in addition to the registration of all common land throughout the entire state.<sup>4</sup>

During the Caliph Mu'tadad's reign (279-289 A.H.), his Vizier<sup>5</sup> 'Ali ibn al-Furāt re-organised the diwān al-kharāj. This was presumably an attempt to simplify the task of supervising the numerous diwāns that dealt with financial affairs. He established the diwān al-dar which, in addition to its clerical departments, was divided into two main sections:<sup>6</sup>

<sup>1</sup> Qummī, Tā'rikh-i Qum, pp. 149 -151.

<sup>2</sup> Qudāma, op.cit., fols. 2a-7a.

<sup>3</sup> Ibid.

<sup>4</sup> Miskawīh, op.cit., vol. V, p.58.

<sup>5</sup> The vizier was Ubaidullah ibn Sulaiman ibn Wahab, but the power was with his deputy 'Alī ibn al-Furat.

<sup>6</sup> Ṣābi, Wuzarā', p.148.



- i) Majlis mā futiḥa min a'māl al-mashriq (the office responsible for lands conquered in the East;<sup>1</sup>
- ii) Majlis mā futiḥa min a'māl al-Maghrib (office for lands conquered in the West.)

This reform, however, did not last for any length of time. The succeeding vizier, Abū Muḥammad 'Ubaīdallāh ibn Sulāimān (d. 288 A.H.) did not agree with the method and later the dīwān al-kharāj seems to have returned to its early Abbasid form.<sup>2</sup> This consisted of three divisions:

- i) Dīwān al-mashriq (East)
- ii) Dīwān al-Maghrib (West)
- iii) Dīwān al-Sawād (Iraq)

The Dīwān al-Sawād was entirely responsible for all forms of upkeep and revenue of the Sawād land.

Ṭabarī states that members of the Ba'nū al-Furāt family were the first to be employed in this Dīwān.<sup>3</sup> Ṣabī says that the total cost of the paper used in dīwān al-Sawād was about 7,000 dīnārs monthly. This, of course, reflects its importance.<sup>4</sup>

---

<sup>1</sup> Jahshiyārī, op.cit., p.281.

<sup>2</sup> Ibid., p.281; Ṣabī, Wuzarā', p.149; Tanūkhī, Nishwār alOmuḥādara, vol. VIII, pp. 3-4.

<sup>3</sup> Ṭabarī, Ta'rikh, vol. III, p.2123.

<sup>4</sup> Ṣabī, Wuzarā', p.37.

Beside the Dīwān al-Kharāj and its branches, Tabarī mentions "Dīwān Zimām al-Kharāj" or "al-Zimām" which was responsible for the control of the financial matters of "dīwān al-Kharāj".<sup>1</sup> This dīwān was created during the Caliph Maḥdī's reign and was developed after his death during the third century.<sup>2</sup>

The number of those employed in the dīwān al-Kharāj would, no doubt, increase when there was a period of political peace as it would decrease during times of war and revolt. The prosperity or otherwise of a province was also governed by these conditions.

Several kinds of employee were necessary either in the central office of dīwān al-kharāj or in various district offices. The ʿāmil, or ʿāmil al-kharāj or, as he was sometimes known, ʿāmil al-kharāj wal-ḍiyāʾ was the principal tax-collector of the province. The sources refer to several posts which appear to have been part of the staff of the tax office in the districts of the Sawād.

Perhaps, at this juncture, it would be useful to endeavour to establish a picture of the method of collection and of the service provided by dīwān al-kharāj during the 3rd century A.H.

The head of the District Dīwān would be the ʿāmil. He would direct administration there by order of the Vizier, and send his

---

<sup>1</sup>Tabarī, Tāʾīkh, III, pp. 493, 522; Ṣābī, Wuzarāʾ, p. 89.

<sup>2</sup>Tabarī, Tāʾīkh, III, pp. 498-520.

account to the Central Dīwān. He was known as the ʿāmil al-kharāj, or sometimes as ʿāmil al-kharāj wal diyāʾ.

The head of Majlis al-Jahbadh, as already stated, was called the Jahbadh. Various definitions have been given of the Jahbadh both by classic and modern writers, according to the elastic character of the post.<sup>1</sup> It must be clearly understood that the post of Jahbadh had expanded and later became as that of an official occupying a high post in dīwān al-kharāj together with the office of tax-farmer.<sup>2</sup> He was then issued with a contract to collect the taxes from a certain area. The responsibility of the position increased towards the end of the 3rd century A.H. At that time the Central Government faced a financial crisis. The Vizier, ʿAlī b. ʿĪsa, borrowed each month over a period, a sum of 150,000 dirhams from two famous Jewish merchants.<sup>3</sup> The condition of the loan was that this sum should be paid each month as the Ahwāz revenues were collected and sent direct to them. From that time, the sources refer to them as the two Jahbadhs or al-Jahbadhain. Thus the post, originally created for tax collection only, finally included the holders as bankers.

The sources also mention the deputy of the Jahbadh, wakīl al-Jahbadh and his employees, ghilmān al-Jahbadh. There is no evidence in the sources with which to clarify the duties of

---

<sup>1</sup> Dūrī, Tāʾrīkh al-ʿIrāq al-Iqtisādī, p.109.

<sup>2</sup> Jahshiyārī, op.cit., pp. 220-1; Ṣābī, Wuzarāʾ, p.277; Tanūkhī, al-Faraj, vol. II, pp. 39-40.

<sup>3</sup> Tanūkhī, Nishwar, vol. VIII, pp. 23-5; Ṣābī, op.cit., pp.79-81.

this level of staff.<sup>1</sup> Their number varied according to the Jahbadh's requirements. They were probably either observers on his behalf, to watch his interests, or, and this perhaps was the more likely, they were appointed by him as temporary collectors or agents, and - as Qudāma mentions<sup>2</sup> - were allowed to appropriate taxes for their own benefit no less than collect them on behalf of the Jahbadh. Incredible as it may seem, even a Jahbadh had been known to sell the right of collection to the highest bidder.

The sources speak also about other work which appears to have been part of tax-office duties. There seem to have been travelling tax-collectors known as muhassilūn.<sup>3</sup> The mustakhrijūn or aṣḥāb al-ʿistikhrāj and their assistants, aʿwānahum frequently spied upon those who professed to be unable to pay and used pressure to enforce them to do so.<sup>4</sup> Abū Yūsuf refers to the fuyūj as companions of the collectors. It may be that they were guides who knew the exact boundaries of the lands in their own areas. There is, however, no modern equivalent for the term and no clarification of it from classical sources.

---

<sup>1</sup>Qudāma, op.cit., fol. 20b; Azdī, op.cit., II, p.187.

<sup>2</sup>Qudāma, op.cit., fol. 20b.

<sup>3</sup>Jāḥiẓ, al-Bayān wa'l-tabīyīn, II, pp. 166-7; Ṭāīfūr, Baghdād, p.99.

<sup>4</sup>Azdī, op.cit., II, p.187.

There were the jund al-istiḥṭhāth to whom Ṣābī refers as "al-jund al-tis'iniya".<sup>1</sup> They were soldiers responsible to the amīl and carried out his orders. They received their salaries every three months (i.e. four times a year) which were, of course, collected from the cultivators and peasants, and paid direct from the dīwān al-kharāj. Abū Yūsuf, however, objected to them being paid four times yearly and stated that monthly payments should be made to them from their own dīwān (i.e. dīwān al-Jaīsh).<sup>2</sup> Perhaps the reason for this suggestion was that because of infrequent payment, abuse of the privilege of collection would become prevalent.

There were seasonal workers employed at times when taxes in kind were collected. These were paid according to their hours of work. If they acted as porters carrying wheat or grain on their shoulders, they were classed as ḥammālīn;<sup>3</sup> if they used pack animals, they were known as makariya; if by water transport they were designated mallahūn.<sup>4</sup> Specialists in the division of yield and who divided it between the cultivators and the treasury's representative, were the mugassimūn<sup>5</sup> or kaīyalūn.

---

<sup>1</sup> Ṣābī, Wuzarā', pp. 18-9.

<sup>2</sup> Abū Yūsuf, op.cit., p.61.

<sup>3</sup> Ṣābī, Wuzarā', pp. 15-17.

<sup>4</sup> Ibn Khillikān, Wafaiāt, III, pp. 78-9; Zaidān, al-tamaddun, II, p.68.

<sup>5</sup> Abū Yūsuf, op.cit., p.62.

The khuzzān were those responsible for storage of the share of the treasury when tax was paid in kind.<sup>1</sup> They gave the receipts (barā'a) to those who brought the produce.<sup>2</sup> It was necessary for the khāzin to keep an accurate account; and a strict balance sheet of all debit and credit would be faithfully kept. It would be set out in three columns:<sup>3</sup>

<u>Stocks received</u>	<u>Stocks outgoing</u>	<u>Balance between columns</u>
the figure in the third column should represent that balance left in the store. According to the information contained in the books of Qudāma, Ibn <u>Khurradādhbeh</u> and <u>Ṣābi</u> , it can be said that there were 42 <u>kharāj</u> stores in Iraq during the 3rd century A.H., in addition to those in <u>Baghdād</u> , <u>Samarra</u> , <u>Baṣra</u> <u>Kūfa</u> , <u>Wasīṭ</u> and <u>Anbar</u> . <sup>4</sup>		

It is little wonder that the burden of the taxpayers was almost unendurable when such an army of workers was sent whenever such work had to be carried out. All of them were paid by diwān al-kharāj and all the payments were collected from cultivators and peasants.

When taxes reached the stage of being collected for a year or more in advance, agriculture suffered the greatest detriment. It was practised for a time in the Sawād province during a financial

---

<sup>1</sup>Ibid., p.86.

<sup>2</sup>Khawārizmī, Mafātīh al-'ulūm, pp. 55-6.

<sup>3</sup>Ibid., p.55.

<sup>4</sup>Qudāma, Nubadh, pp. 236-237; Ibn Khurradādhbeh, opcit., pp. 8-14.

crisis of the central treasury, and sometimes it was practised by high officials (i.e. 'āmils) in other provinces. Ṭabarī mentions several occasions, one of which was when Rāfi' ibn Harthama, the 'āmil of Khurāsān province, collected kharāj tax in 269 A.H./882 A.D. for more than ten years in advance, while the impoverished owners were unable to cultivate their land because all their capital had been taken from them.<sup>1</sup>

In the year 279 A.H./892 A.D., during one period of financial crisis, the Vizier al-Qāsim b. Ubaidillah b. Sulaymān, collected kharāj tax for more than two years in advance.<sup>2</sup> Jahshīyārī speaks of the heavy tax which sometimes exceeded the value of the whole of the production and caused the cultivator to seek the protection of a higher official talji'a from the unjust dealing, and perhaps even more unjustifiable brutality, of a tax-collector.<sup>3</sup> This, it was said, sometimes even amounted to torture. Many times the condition of poverty of the cultivators and peasants was such that the Caliph or Vizier would be forced to advise tax-collectors to show justice and mercy to the payers.<sup>4</sup>

This reflects that the central government were not unaware that often tax-payers were taxed far in excess of the official rate. Abū Yūsuf refers openly to the injustice used towards tax-payers in the Sawād, and this appears to be the reason why

---

<sup>1</sup>Ṭabarī, Ta'rikh, III, pp. 1738-9, 2039.

<sup>2</sup>Mas'ūdī, Murūj, IV, pp. 275-6; ibn al-'Athīr, op.cit., VII, pp. 183-4; ibn Kathīr, al-bidaya, XI, p.95; ibn Taghrī-birdī, Nujūm, III, p.128.

<sup>3</sup>Jahshīyārī, op.cit., p.118; Qudāma, Nubadh, pp. 240-1; ibn al-Faqīh,

the Caliph Harūn al-Rashīd requested him to write his book.<sup>1</sup>  
 In it he opposed the practice of qabāla not only in the Sawād,  
 but in every part of the state; he realised that tax-farmers  
 acted unlawfully for their own benefit. He stated that "they rob  
 the taxpayer by imposing on them taxes they do not owe and  
 punish them in repulsive ways to secure their own profit".<sup>2</sup>  
 The sources described the manner of punishment meted out to tax-  
 payers if they refused to pay whatever sums tax-collectors imposed.  
 Jahshiyārī refers to many severe punishments, threats of being  
 thrown to lions, wasps, and other ways of exerting pressure.<sup>3</sup>  
 Abū Yūsuf says, in this context, that they beat them cruelly, made  
 the tax-payer stand in the blazing sun, on one foot, for a  
 considerable time. Heavy stones or water-buckets would often  
 be hung from the neck of a defaulter; they would be tied with  
 ropes and left without food for a long time.<sup>4</sup>

It would seem that such punishment and torture continued,  
 perhaps with even greater brutality, for a long time after Abū  
 Yūsuf. In 233 A.H./847 A.D. Muḥammad ibn 'Abdul Malīk al-Zayyāt,

---

Bulḍān, pp. 282-4; Khawārizmī, op.cit., p.62; Istakhri, op.cit.,  
 p.158; ibn Hawqal, op.cit., p.303.

<sup>4</sup>Ṣabī, Wuzarā', p.369; Mas'ūdi, Murūj, IV, p.12; Khaṭīb al-  
Baghdādī, op.cit., vol. III, p.350.

<sup>1</sup>Abū Yūsuf, op.cit., p.2; *supra*, p. 207,fn. 2.

<sup>2</sup>Ibid., p.60.

<sup>3</sup>Jahshiyārī, op.cit., pp. 142-3.

<sup>4</sup>Abū Yūsuf, op.cit., p.60.



Vizier of the Caliph Mutawakkil, invented an even more cruel method of extortion for evaders of tax payment. He created a furnace of iron which had protruding nails inside it.<sup>1</sup> This undoubtedly points to the continued use of severe punishment if payment were not forthcoming.

The rate of  $2/5$  (40%) which was applied by the Caliph Ma'mun was practiced when taxes were collected in kind. Perhaps it is worthwhile here to mention that those figures spoken of by most sources merely as "wheat and barley" are actually inclusive terms and also cover various kindred productions which were listed under either of these products. The purpose of this, according to Būzjānī, was to simplify the clerical work of the collector and to minimize the number of list-headings, and also the assessment of payment.<sup>2</sup> The kindred produce under each heading coincided in price. Būzjānī, however, gave four headings for most of the agricultural produce of the Sawād which were: Sesame, Wheat, Barley and the mixed produce classed as "Juhjundam." Listed with wheat were chick-peas, kidney-beans, lentils, flaxseed, fenugreek, oats, dried grapes, sumach almonds, hazel nuts, "shahdānāj", kumar seeds and the "Hurtun". Under the heading of barley were rice, Guinea corn, garden cress seeds, dried broad-beans. "Sesame" included mustard seed, coriander seed, caraway seed, herbs, hashish and seeds for cattle foods.

<sup>1</sup>Tabarī, Ta'rikh III, p.1374; al-Khatīb al-Baghdādī, p.343.

<sup>2</sup>Būzjānī, Hawī, fol. 203b.

The Juhjandam, however, was a mixture of half wheat and half barley.<sup>1</sup>

It would seem that many kinds of produce of the Sawād were not mentioned in these categories although they were liable for tax, according to Buzjānī. The information given in his four categories, however, concerns only his own time. The origins of this method of classification date from earlier periods.<sup>2</sup>

The principle is visible from the beginning of Islamic government in the Sawād, though considerable changes doubtless occurred with time both in the prices and importance of some products.

In the Sawād, as in many other places, harvesting of different kinds of produce was spread over the year according to its kind. Harvesting of wheat and barley would be made in April, May and June as it became ready. That of winter cereals in June and July; cotton picking, which lasted for five months, commenced in August; sorghum and sesame were harvested in September and October, rice was harvested in November, the dates in autumn, while summer yielded its grapes and various kinds of fruit.

It is incredible that taxes, as a whole, were collected before calculating the value of the produce. It would, however, be dangerous to delay collection of the taxes for any length of time after the produce had been harvested. It is reasonable, however, to suppose that the tax-collection in the Sawād during

---

<sup>1</sup> Ibid.

<sup>2</sup> The "ritāb" and grapes were probably more important during the reign of Omar I than sesame.

the third century A.H. was extended over the year, and there are instances provided by contemporary sources which support this theory.

This points to the probability that the 'nawrūz', a term previously used by the Persians, was the commencement of the tax year and that iftitāḥ al-kharāj was merely the official announcement that collection of taxes had begun with the new year.<sup>1</sup>

As has been stated, taxes were paid either in kind or in cash. It is probable that the share of the state from the fields producing wheat or barley, rice, millet, etc., from individual districts, was collected in kind at the time of harvest. For other taxes which were paid in cash, various terms were used; there were the "tubāul", "tubūl al-Sultān", "nujūm", "anjum", "munajjama", "aqṣāṭ", - all of which embrace the meaning of "payment by instalments".<sup>2</sup>

"Tubūl" or "tubūl al-Sultān" was used in Egypt during the last quarter of the second century A.H.<sup>3</sup> Karabacek, however, proves that this term was of Greek origin. It was used in the Arabic papyri in the sense of "records of Kharāj"<sup>4</sup> Grohmann states that

---

<sup>1</sup>Tabarī, Tā'rikh, III, p.2143; Azdī, op.cit., II, p.311; Khawārizmī, Mafāṭih, p.60.

<sup>2</sup>Grohman, APEL, II, no. 44, pp. 27-9, no. 78, pp. 33-6, no. 83, pp. 49-50.

<sup>3</sup>Ibid., No. 4, p.27, for example, dated 6 Ramaḍān 187 (5th November 794).

<sup>4</sup>Zamakhsharī, 'Asās al-balāgha, II, p.62 (Cairo 1932); Grohmann, APEL, II, 27-9.

the "tubūl" was used throughout the papyri collection (APEL and PSR) to mean 'instalments'.<sup>1</sup>

"Nujūm or "anjum" or "munajjima" were terms widely used throughout the Abbasid empire and even in Egypt, together with "tubūl" to mean the period when the instalment is related to the manner of tax-paying according to the "kharāji year", This view is supported by the document published in PERF.<sup>2</sup> In Iraq, the term "aqṣāt" together with the term "nujūm" means that the tax was collected in instalments.<sup>3</sup>

Various factors seem to have combined to affect the quantity of revenue when it was finally handed to the treasury. The difference would appear to be far greater than the natural deterioration in weight by drying the produce after it was harvested, "naqīṣat al-ta'ām".<sup>4</sup>

A very prominent factor was the personal greed of many collectors who unlawfully not only imposed extra tax for the payment of themselves and their assistants but drew a great deal more of the money or produce collected as actual tax and added it to their own perquisites.

<sup>1</sup>Grohman, APEL, II, 37; PSR, no. 428.

<sup>2</sup>PERF, no. 626, line 10, no. 638, line 7; PERF, no. 612.

<sup>3</sup>Tabarī, Ta'rikh, III, p. 628; ibn al-'Athīr, op.cit., VI, p. 51; VII, p. 52; Jahshiyārī, op.cit., pp. 151, 220; Taifūr, op.cit., p. 99; Khawarizmī, op.cit., p. 21; Azdī, op.cit., II, 239-40.

<sup>4</sup>Abū Yūsuf, op.cit., p. 62.

The principles of the taxation of land and goods originally was based on the religious ideals of Islam, but the only part of the principles of taxation remaining, which could have had a foundation in religion, was the prerogative of the Imām to lessen or extend the amount of collection. Even this, though described by Levy as a continuation of the original principles, was actually derived from a Sassanian origin.<sup>1</sup>

Nearly all the Abbasid caliphs during the 3rd century A.H. required their rights in this respect. The sources, from time to time, speak of the transfer of land from the "heavy tax category" "al-rusūm al-thaqīla" to one of a lighter assessment "al-rusūm al-khafīfa". Such a transfer would be made for the benefit of a special person or may have been lessened for the benefit of a district where the land had become overworked or impoverished and needed rest and fertilisation. Large areas were transferred from kharāj-land and became either 'ushri land or even were made tax-free.<sup>2</sup>

The vizier was also able to cancel the heavy taxes and, by virtue of his office, to charge at a lesser rate. The orders to do this whether given by the caliph or by the vizier had to be registered and noted in the central dīwān of Kharāj in the capital.

---

<sup>1</sup> Levy, The social, p.311.

<sup>2</sup> Tabarī, Ta'rikh, III, p.628; ibn al-'Athīr, op.cit., VI, p.51; VII, p.52; Jahshiyārī, op.cit., pp. 151, 220; Taifur, op.cit., p.99. Khawarizmī, op.cit., p.21; Azdi, op.cit., II, 239-40.

A copy of the order would then be despatched for the information of the relative local dīwān of kharāj.<sup>1</sup>

In the Abbasid period certain terms such as "'iḥṭmāl", "taswīgh", "ḥaṭīṭa", "ṭarīka" and "ṭu'ma" were used to specify various forms of tax reduction on land.<sup>2</sup>

The "'iḥṭmāl", according to Lisān al-'Arab dictionary, is a tax-free grant of land by the ruler to the person.<sup>3</sup> A similar definition was given by Ṣabī in an old glossary of Kiṭāb al-wuzarā'.<sup>4</sup> According to this, the 'iḥṭmāl was a very privileged grant. Qudāma, however, states that this practice was not even known by the Persians during their era of government in the Sawād.<sup>5</sup>

The sources refer to the "'iḥṭmāl Yaqṭīn". The commencement of the Abbasid state in the Sawād was the first time it was put into practice;<sup>6</sup> thus, even at that time it would seem that the term was known. Both Qudāma and Khawārizmī, however, give another definition which ultimately means the same thing.<sup>7</sup> Qudāma defines it as "protection of the day'a"<sup>8</sup> while Khawārizmī gives it a

<sup>1</sup> Qudāma, op. cit. p.240; Qalqashandī, Subḥ al-a'shā, I, p.96; Ibn al-Ṣairafī, Qānun dīwān al-rasā'il, pp. 94, 100-3, 108, 116, 118, 144-5.

<sup>2</sup> EI<sup>2</sup>, art 'Dīwān', s.v.

<sup>3</sup> Ibn Manẓūr, Lisān al-'arab, VII, p.150.

<sup>4</sup> Ṣabī, Wuzarā', p.42.

<sup>5</sup> Qudāma, Nubadh, p.241.

<sup>6</sup> Ibid.

<sup>7</sup> Khawārizmī, p.60.

<sup>8</sup> Qudāma, Muladh, p.241.

general meaning. He says that the "iḡhar" is "the protection".<sup>1</sup> All these definitions seem to point to the fact that - in one way or another - tax-collectors were barred from certain lands which were entered in the registers of Dīwān al-Kharāj, after their boundaries had been set by the dīwān al-dār.<sup>2</sup>

The "iḥtimāl" refers to a tax-payer who has been exempted from payment for a certain period. Iṣfahānī, for instance, mentions that Harūn al-Rashīd himself ordered exemption of the kharāj tax on a land belonging to a monastery for a period of seven years.<sup>3</sup>

It seems that the practice of "iḥtimāl" was similar to that of the "taswīgh", the difference between them being that, while the "iḥtimāl" was exemption from all taxes for a limited time, the "taswīgh" was a percentage of the tax imposed on the land of the cultivator for the duration of his life.<sup>4</sup> The "taswīgh" also had another meaning, according to al-Khaṭīb al-Baḡhdādī. When the Caliph Ma'mūn granted the entire revenue from the kharāj of Egypt to Abdullāh b. Ṭāhir, he termed it "taswīgh".<sup>5</sup> In Kitāb al-Aghānī the author speaks of the "taswīgh" in the same

---

<sup>1</sup>Khawārizmī, p.60.

<sup>2</sup>Qudāma, op.cit., fol.18a.

<sup>3</sup>Iṣfahānī, al-Aghānī, V, p.419.

<sup>4</sup>Tabarī, Tā'rikh, III, pp. 774, 1030; Ibn al-Faqīh, op.cit., p.270; Ṭāifūr, op.cit., p.235; Azdi, op.cit., II, p.271; Khawārizmī, Mafatīh, p.60.

<sup>5</sup>Khaṭīb al-Baḡhdādī, op.cit., vol. IX, p.484.

terms, but adds that it was not only the revenue of the Egyptian kharāj, but additionally from his own lands.<sup>1</sup> The term "taswīgh," however, does not only apply to this special incident quoted concerning the caliph. Sources speak of it when the 'āmil of Egypt granted the kharāj revenue of Syria for three years to one of his assistants.<sup>2</sup>

In some cases the "taswīgh" was an act of grace by the caliph when he overlooked the right of the Treasury in favour of a special governor. We are told that the Caliph Ma'mūn, after dismissing Quḥṭuba b. al-Ḥasan, his 'āmil for the Nībal province and imprisoning him for refusing to pay the Treasury the revenue which had been collected, ordered his release and allowed him to use the revenue for his own purposes. This also was referred to as "taswīgh".<sup>3</sup>

The terms "ḥatīṭa" and "tarīka" were given the same definitions as "taswīgh".\* In Kitāb al-Aghānī the term "ḥatīṭa" was used also to mean "price reduction".<sup>4</sup> Other sources refer to the Caliph Ma'mūn's action in reducing the amount of kharāj in two

<sup>1</sup> Aghānī, vol. XII, pp. 101-4.

<sup>2</sup> Ibid., XII, p. 106.

<sup>3</sup> Taifūr, op.cit., p. 99.

<sup>4</sup> Aghānī, V, pp. 164-5.

\* See Khawarizmī, op. cit., p. 60  
Bosworth, op.cit., p. 134



districts in Persia as "ḥaṭīṭa".<sup>1</sup> All these five terms have the general meaning either of complete rebate of revenue or partial reduction by the Treasury of the amount due. Sanction for this would be the right of the Caliph who, if he himself had agreed to any of these conditions, would notify the section responsible, the dīwān al-kharāj.<sup>2</sup>

Two more factors which tended to lessen revenue collection were the "tu'ma" and the "talji'a". "Tu'ma" was that land granted to a person or persons for their life-time only. By this means they could avoid the 50<sup>0</sup>/o kharāj rate and enjoy an appreciable reduction which required from them only 10<sup>0</sup>/o, as the land was classed as "private ownership" (mulk).<sup>3</sup>

When a landowner found himself over-burdened by current taxation, in addition to the extra heavy expenses imposed on him by the tax-collector, he would sometimes seek protection from a higher official. In such a case he would beg the acceptance by such a person, of the reputed ownership of the land and would ask that it be considered "talji'a" property. Under these conditions it would be taxed 10<sup>0</sup>/o, or even less, according to special arrangement with the official (protector) concerned.<sup>4</sup>

<sup>1</sup>Tabarī, Tā'rīkh, III, p.1030; Azdī, op.cit., II, 271.

<sup>2</sup>Qudāma, op.cit., fol. 17b.

<sup>3</sup>Khawārizmī, op.cit., p.60.

<sup>4</sup>Jahshiyārī, op.cit., p.118; Ibn al-Faqīh, op.cit., p.282; Iṣṭakhrī, op.cit., p.158.

In both the practice of "tu'ma" and "talji'a" the coffers of the Treasury would be considerably lowered, particularly when such practice became extensive. Taifur mentions in this context another definition of the "tu'ma". He states that the Caliph Ma'mun granted half the total of the "sadaqat" of Basra for seven years to Ahmad b. Yusuf.<sup>1</sup> In each case the sources mention that the reduction was for a limited time only.

A further cause of the lowness of Treasury funds was the emigration of farmers and land-workers to the cities. Not only oppression, violence and even torture were used to extort revenue, but taxes were too frequently collected for a year in advance.<sup>2</sup> As a result, production decreased and land lay barren and uncultivated. This obviously depleted the Central Treasury, and was the result of the short-sighted policy in the tax-collecting system. Abū Yūsuf requested the Caliph to prevent any further reductions by the 'amils from the kharaj tax.<sup>3</sup> This indicates the frequency of such actions to the detriment of the state coffers.

With so much power in the hands of individual collectors, a great deal would depend on the character and wisdom of individual 'amils. The reaction of the local people to his personality would

---

<sup>1</sup>Taifur, op.cit., p.235.

<sup>2</sup>Tabari, Ta'rikh, III, pp. 1738-9, 2039; Ibn al-'Athir, op.cit., VI, p.62.

<sup>3</sup>Abū Yūsuf, op.cit., p.49.

be an important factor. Thus, a wise collector would take into account the fact that effort and will to improve the yield was very necessary to prevent dearth of revenue both for himself and the Treasury. In the case of the greedy collectors, they would first benefit themselves and the Treasury might have the residue, if any.

The sources clearly affirm that those 'amils and amirs who ruled in the Eastern provinces spent most of the revenue "yartafiqūn" and only sent gifts to the capital.<sup>1</sup> The sources say that, in Egypt, the average of collection was closely related to the height of the waters of the Nile at flood period. At this period the 'amil and the 'amīr usually co-operated to inform the capital that the level was low. They, however, collected revenue always at high level rates for their own benefit. The sources are voluble concerning this and other types of collection.<sup>2</sup>

With all these extractions from the anticipated amount of revenue it is clear that the amount of yield listed was far different from that actually received by the Treasury. From the lists as recorded by Qudāma and others, and taking into consideration the various kinds of produce from which revenue was to be collected, the comparison between that which was anticipated and that actually

---

<sup>1</sup> Ya'qūbī, Buldan/<sup>308</sup>Aghānī, V, pp. 195-6, vol. X, pp. 58; Muqaddisī, op.cit., p. 337.

<sup>2</sup> Ibn 'Iyās, op.cit., pp. 36-7.

received must have alarmed the Central Treasury. This probably caused the high officials of it to endeavour to create a system by which it should not be so depleted. The caliph himself would be concerned in the investigation.<sup>1</sup>

Concerning the Sawād, the sources mention all these conditions. They speak of the corrupt tax-collectors and their employees who frequently collected three or fourfold the amount of the actual tax for their own benefit. This evil practice applied to every method of collection, whether damān, qabāla, or direct collection. The sources ignored the part played by the 'amils in Iraq in spite of its importance and natural fertility. Various reasons could be suggested for their silence in this respect. The non-existence of information here does not necessarily mean that an 'amil of the Sawād was himself guiltless of similar practices. His behaviour in this respect may not have been questioned on account of the importance of his position. It may have been that such extractions did not appear openly as being taken directly from the yield, or it may have been regarded as one of the everyday occurrences which were not worthy of mention.

When a high official was dismissed from office, his activities during his term of power were closely investigated as were the people employed by him. Very often all his means and property were confiscated. This would seem to reflect that practices of this

---

<sup>1</sup>Tabarī, Ta'rikh, III, p.748; Jahshiyārī, op.cit., p.233; Ibn Qutaibah, U'yun al-akhbar, I, p.13; Dimashqī, al-Isharah, p.48; Aghānī, I, p.58; Azdi, op.cit., II, 215-6 for example.

kind were common knowledge and were brought to light when the official fell out of favour, or his personal demands on the revenue became exorbitant. A carefully prepared list of confiscations made in the period of the 3rd century show that in every case the culprit was a high official.<sup>1</sup> The sources speak of one exception which was that of a servant who had brought a large sum of money with him which had been paid to him by the governor of Egypt.<sup>2</sup>

It is virtually impossible to give any figure of the exact proportion of the difference in revenue yield actually received by the Treasury and that collected by the armies of 'amils and tax-collectors. What ever was extorted by them could seldom, if ever, reach the recorders as in every case those who extorted would keep their activities strictly within their own knowledge.

---

<sup>1</sup> Ṣabī, Wuzarā', pp. 44, 291, 333-4; 'Araib, Sila, pp. 39, 65, 66, 74, 108-9, 112, 113, 127, 183, 184; Miskawaih, op.cit., vol. V, pp. 5, 8, 14, 24, 66, 94, 100, 102, 109, 112, 113, 119, 128, 131, 141, 144, 146, 149, 155, 209, 212, 239; Tanukhī, Nishwār, vol. VIII, p.53.

<sup>2</sup> Ṭabari, Tā'rikh, III, p.2112; Ibn al-'Athīr, op.cit., vol. VII, p.17.

Appendix

- \* one qafīz of wheat or barley
- \*\* the tax abolished
- \*\*\* unspecified
- \*\*\*\* the rate per two jarībs
- \*\*\*\*\* the rate either on one Persian palm fārisiyya,  
or two other palm trees
- d. dirham per jarīb
- q. qafīz per jarīb

	ar. d (land)	'Land or Hamir Zur' (cultivation)	Wheat	Barley	Other trees	Wheat	Barley	Cotton	Sugar cane	Sesame	Vegetables	Fruit trees	Olive trees
1	-	1d.	-	-	-	5d.	10d.	-	-	-	-	-	-
2	-	-	4d.	2d.	8d.	-	10d.	-	6d.	-	-	-	-
3	-	-	4d.	2d.	8d.	-	10d.	-	-	-	-	-	12d.
4	-	-	-	-	8d.	-	10d.	-	6d.	-	-	-	-
5	1d. 1q.	-	-	-	-	5d.	10d.	-	-	-	-	-	-
6	-	1d. 1q*	-	-	-	-	-	-	-	-	-	-	-
7	-	1d. 1q.*	-	-	**	**	**	-	-	-	-	-	-
8	-	1d. 1q.	-	-	**	-	10d.	5d.	-	5d.	3d.	-	-
9	-	1d. 1q.	-	-	***	5d. 5q.	-	-	-	-	-	10d. 10q.	-
10	-	-	4d.	2d.	10d.	-	10d.	-	6d.	-	-	-	-
11	-	-	4d.	2d.	5d.	-	10d.	-	6d.	-	-	-	-
12	1d. 1q.	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	**	8d.	8d.	-	-	8d.	-	-	-
14	-	**** 1d.	2d.	1d.	-	-	-	-	-	-	-	-	-
15	-	-	-	-	***** 1d.	10d.	10d.	5d.	-	-	-	-	-
16	-	1d. 1q.	-	-	-	2d.	-	-	-	-	-	-	-
17	-	-	-	-	8d.	-	-	-	-	-	-	-	-
18	-	-	-	-	-	5d.	10d.	-	-	-	-	-	-
19	-	-	4d.	2d.	8d.	6d.	10d.	-	-	-	-	-	12d.
20	-	-	4d.	2d.	10d.	6d.	8d.	-	-	-	-	-	-

## Chapter VI

### AGRICULTURE AS A SOURCE OF REVENUE

The agricultural revenues of Iraq, which it is relevant to speak of at this point, were largely spent in Iraq itself. In a few cases part of it was spent either in Khurāsan<sup>1</sup> or used for building fortresses for defence of the land bordering Byzantium.<sup>2</sup>

The revenue derived from agriculture and its effect on the country as a whole, is considered on the following pages.

Qudāma ibn Jafar provides, in his Kitāb al-Kharāj wa San'at al Kitāba, detailed information concerning the Sawād revenue. The significance of his work is imponderable, provided as it was by a contemporary writer who was employed as a Kātib by 'Alī ibn Muḥammad b. al-Furat. The latter served as vizier on three occasions during the reign of the Caliph al-Muqtadir (295-320/908-832).<sup>3</sup> By reason of his employment, Qudāma would probably have had access to official documents and registers. In his article relating to Qudāma's works, de Slane described him as an official occupying an important position in the Abbasid administration.<sup>4</sup> Certainly the informative material which Qudāma has depicted

<sup>1</sup>Tabarī, Annals III, p.1043.

<sup>2</sup>Ibn al-'Athīr, al-Kāmil fi 'l-Ta'rikh, vol. VI, p.180.

<sup>3</sup>Ibn Miskawāh, Tajarib al Uman, V, pp. 8-13, 42, 136. Hamadānī, Takmilat, I, p.26.

<sup>4</sup>De Slane, M.G., "Notice sur et Ses Ecartis", Journal Asiatique, 1862, pp. 155-181.



with great skill and veracity renders his work unique. He states clearly that his account of the revenue of the Sawād was based on what was known as the 'ibra of the year 204 A.H./819 A.D. He refers to his sources as representing the reign of the Caliph Ma'mūn which was, as he states, the earliest surviving document of 'ibra in the diwān. He tells us that the diwān was burnt (set on fire) during the war between the two Caliphs al-Amīn and al-Ma'mūn.<sup>1</sup>

It would seem that his account of the revenue which concerned the Sawād not only represents the year 204 A.H. (819 A.D.). In his account of the individual districts Qudāma excludes the figures of both Kūrat Asātn Dijla and Nahr al-Şila. He affirms that the figures for these districts represent the 'ibra of the year 260 A.H. (873 A.D.). His account, in the main, however, represents the revenue of Sawād as it was registered in 204 A.H. (819 A.D.), shortly after the diwān was re-established.<sup>2</sup> Kremer suggests that Qudāma's account of revenue covers the period 204/237 A.H. (819-51 A.D.).<sup>3</sup> Dūrī considered it to represent the reign of the Caliph Ma'mūn (198-218 A.H./813-833 A.D.), and that it specifically applied

---

<sup>1</sup> Qudāma, Kitāb al-Kharāj wa Şan'at al-Kitāba (Nubadh) (1889), Brill, p.236.

<sup>2</sup> Qudāma, op.cit., p.231.

<sup>3</sup> Kramer, A. Von, Über des Einnahmebudget... des.. Harun, pp. 12-14.

to the years 198-204, which were the first years of Ma'mūn's reign.<sup>1</sup> The 'ibra, however, is a technical term used by the secretaries of the dīwān al-Kharāj and refers to "What is taken into account or what is averaged out".<sup>2</sup> In his Kitāb Mafatīh al-'ulūm, Khawārazmī defines the "'bra" as "the fixing of the Ṣadaqāt for each separate province."<sup>3</sup> He also gives another definition for the term 'ibrat Ṣā'ir al-irtifa'āt, as "the averaging-out of the revenue collection of the entire state". Further, he gives a prototype of how to calculate such 'ibra. For this, he says, it is essential to add the tax yield of the best productive year to that of the least productive and then halve the total, after collating the prices and providing against any other contingencies which might arise. Such an average would represent the 'ibra.<sup>4</sup>

From jurist writings it would appear that the word "Ṣadaqa" was related mainly to religious observance of the use of money collected on behalf of charity. The same word does not, however, seem to have been confined to this use by the tax authorities; to them it seems to have been synonymous with taxes in general. The meaning given by Khawārazmī related to the latter definition

---

<sup>1</sup> Dūrī, A.A., Tārīkh al-'Irāq al-'Iqtisādī fi'l qarn al-rābi' al-ḥijrī (1948), p.188, n.2.

<sup>2</sup> Bosworth, C.E., Abū 'Abdullāh al-Khawārazmī on the Technical Terms of the Secretary's Art, JESHO (1969), vol. XII, pt. II, p.135.

<sup>3</sup> Bosworth, op.cit., p.135.

<sup>4</sup> Khawārizmī, op.cit., p.40.

of the word, as he uses it with dīwān al-kharāj and classifies it under the heading "muāda'at dīwān al-kharāj!"<sup>1</sup>

Professor B. Lewis thinks, however, that Khawārazmī's account refers to Sāmānīd government offices rather than to those of the Abbasid, but that much of what he says is certainly applicable to Abbasid administration.<sup>2</sup> In his contribution to the Administrative History of Mediaeval Islam, Bosworth added that it was unlikely that the Sāmānīds made very extensive additions to the established corpus of Abbasid administrative practice.<sup>3</sup>

Three centuries later Naṣīr al-Dīn Ṭūsī said that "the just and equitable kings" have estimated (the average) on a basis of three years - a good, a medium and a poor one.<sup>4</sup> Naṣīr al-Dīn also produces information which helps to clarify the method of calculating the prices and any other factors arising "al-ʿawarid" which would need to be taken into account when assessing. He says that in the beginning of each year the average price was "fixed in all exactness and divided into several instalments (ḥiṣṣa)".<sup>5</sup> These sums were fixed for each piece of land

<sup>1</sup> Supra, p. 275, n. 3.

<sup>2</sup> EI<sup>2</sup>, art. 'Daftar'.

<sup>3</sup> Bosworth, op.cit., p. 116.

<sup>4</sup> Minovi, and Minorsky, V., "Naṣīr al-Dīn al-Ṭūsī on Finance", BSOS, X (1939-42), pp. 759-772; Bosworth, op.cit., pp. 135-6; Amedroz, Abbasid Administration in its Decay, pp. 827, 832, 840.

<sup>5</sup> Minovi and Minorsky, op.cit., p. 759.

and were presumably registered in the book of the Kharāj, and the amount thus calculated would be collected accordingly.<sup>1</sup>

More information is necessary in order to provide a clearer picture, and to explain how calculations were arrived at, taking the other factors into consideration.

The 'ibra, as Løkkegaard understood it, was an average calculated on the basis of the amount of taxes collected during a certain series of years. The 'ibra, however, was not only employed to calculate the tax-paying ability of provinces, but was also used for smaller areas.<sup>2</sup> Qudāma speaks of the 'ibra of individual astān, while others refer to the 'ibra of a certain daī'a.<sup>3</sup>

It would seem, however, that in order to arrive at the calculation of the 'ibra, a large number of officials were employed in fiscal affairs. The surveyor (massāh) played a conspicuous

---

<sup>1</sup>Bosworth, op.cit., p.120. This survey was the basis of all assessments in the mediaeval Islamic world. It can be traced in such widely separated lands as 12th century Norman Sicily, where a special archive for 'dafter al-hudūd existed, and Il-Khanid, Persia, where again a special Archive, the Bait al-Qanun, is mentioned. Hinz, cf., "Das Rechnungswesen Orientalischer Reichsfinanzämter im Mittelalter", Der Islam, XXIX (1950), pp. 134-7. He enumerates the qanun (Reichshebebuch) as the last of the seven basic registers standard in Islamic financial practice from the Seljuq period onwards. Løkkegaard, however, surmises that the Arabic 'Qānūn' is simply a rendering of the Greek 'xavwv', Islamic Taxation in the Classic Period (1950), Copenhagen, p.108.

<sup>2</sup>Løkkegaard, op.cit., pp. 16, 105.

<sup>3</sup>Qudāma, Nubadh, p.237.

part. When measurements of irregular plots of land had to be ascertained, his results were recorded in the special registry for this purpose, known as darzūn, and became the basis for the assessment.<sup>1</sup> Khawārazmī defines the darzūn as the record made by the surveyor taken from the rough draft in which the measurements made by the surveyor were set down.<sup>2</sup>

The Ta'dīl, as has already been stated, was a re-assessment of taxes in order to meet the changing circumstances of individuals or communities over a period. Such reconsideration was imperative in order to estimate the variability of production, lesser fertility of the land, or necessary changes in irrigation methods. Another factor was the demand for produce, and the distance of transportation, the cost of which would most certainly affect the price charged for the various kinds of commodity. A copy of the current 'ibra for each district was forwarded to the central dīwān al-kharāj, the total being the basis of the Dastūr.<sup>3</sup>

---

<sup>1</sup> Løkkogaard, op.cit., p.180.

<sup>2</sup> Khawārazmī, op.cit., p.58. Bosworth, op.cit., p.129, points out that the only scholar who has previously put forward any suggestion, as far as this tax is concerned, is Løkkogaard, Islamic Taxation, p.180, n. 366, cf. 116-117., who tentatively proposes a link with the term 'tirāza' found in Abū Yūsuf's Kitāb al-Kharāj.

<sup>3</sup> Khawārazmī defines ad-Dastūr as "a document giving financial totals copied out from the first draft 'sawad'"; Bosworth, op.cit., p.128; Lambton, A.K.S., Landlord and Peasant in Persia, Glossary, 428; see EI<sup>2</sup>, art. 'Dastūr'.

It would seem that such a record was available to Qudāma for the year 204 A.H./848 A.D., and that from it he copied his list of 'ibra.<sup>1</sup> When he discovered that no figures had been recorded for that period concerning Kūrat dijla and nahr al-Sila, he consulted another official record representing the 'ibra for the year 260 A.H./837 A.D.<sup>2</sup>

In his Muqaddima, ibn Khaldūn provides a revenue list of the Abbasid empire which he stated was copied from "Jirāb al-dawla" and represents the reign of the Caliph Ma'mūn.<sup>3</sup> In his translation of the Muqaddima, de Slane defines "Jirāb al-dawla" as "Resources de l'Empire".<sup>4</sup> Levy and Rosenthal prefer to consider it a book.<sup>5</sup> Kramer claims that ibn Khaldūn's account does not date from the reign of the Caliph Ma'mūn (as ibn Khaldūn himself stated) but that it reflects the situation which existed during the reign of the Caliph Harūn al-Rashīd.<sup>6</sup> Miah accepts

---

<sup>1</sup>Qudāma, Nubadh, p.236.

<sup>2</sup>Qudāma, op.cit., p.237.

<sup>3</sup>Ibn Khaldūn, Prolegomenes, tr. MacGuckin de Slane, vol. I, p.364. De Slane, however, suggests that the literal meaning is "sac a Provisions".

<sup>4</sup>Ibid.

<sup>5</sup>Rosenthal, F., Muqaddimah, vol. I, pp. 361-3.

<sup>6</sup>Kramer, A. Von, Über das Einnahmehudget. des Harun, pp. 12-14.

von Kramer's opinion and considers that the period of account was not sufficiently broad to allow for any changes in revenue conditions.<sup>1</sup>

Among Arabic authors, however, "Jirāb al-Dawla" seems to have been used once as a title given to Abū al-'Abbās Aḥmad b. 'Alawāih al-Shajari. Arabic biographers do not seem to mention him. The one reference to him appears in ibn Khaldūn's book and his name appears in full on the cover of his book together with the title Kitāb tarwīḥ al-arwāḥ wa niftāḥ al-Surūr wa'l afrah.<sup>2</sup> This suggests the possibility that Jirāb al-Dawla was an author who probably held an official position in the diwān or was responsible for the Sijillāt and this would enable him to hold such a title.

Considering the possibility of Jirāb al-Dawla as an author from whom ibn Khaldūn derived his information, or at least that he was an official dealing with revenue, it would seem that some account of his information should appear in the only surviving manuscript of Kitāb Tarwīḥ al Arwāḥ. Close examination reveals no reference to such an account. It may well have been that there was yet another book by the same or another author, bearing the same title, which is as yet undiscovered. Failing this supposition, the alternative is that ibn Khaldūn perhaps meant that his accounts

---

<sup>1</sup>Miah, The Reign of al-Mutawakkil, Thesis, London University (1962), p.174.

<sup>2</sup>Jirāb al-Dawla al-Shajari, Abū 'l 'Abbās Aḥmad ibn Muḥammad ibn 'Alawāih, Kitāb tarwīḥ al-arwāḥ wa niftāḥ al-Surūr wa'l afrah, (MS), The Bibliothèque Nationale, Paris (Arabe, No. 3527).

were copied from official records (Sijillāt).

It is important, however, to note that the accounts for Khurasan province as depicted in ibn Khaldūn's text, do not correspond with those which the Caliph Ma'mūn commanded his 'Amīl of Khurāsān to assess in the year 211 A.H./826 A.D. Moreover the central diwān of the kharāj in Baghdād, as has already been stated, was destroyed by fire in the year 204 A.H./819 A.D.<sup>1</sup>; thus ibn Khaldūn's account of revenue would, in fact, cover the period between the years 205-10 A.H./820-25 A.D., and gives one set of figures representing the Sawād Province as a whole listed with the other provinces of the Abbasid state. These figures represent the provinces only and not the separate districts.

Ibn Khurradādhbeh's account of Sawād revenue appears to represent the years of the last quarter of the 3rd century A.H., and provides detailed information concerned with the revenue collection from and the administration of the individual districts of the Sawād.<sup>2</sup>

When comparing the lists of revenue provided by Qudāma and ibn Khurradādhbeh, there is not only similarity in their figures for most districts, but in the method of presentation used, although ibn Khurradādhbeh gives greater detail concerning administration of

---

<sup>1</sup> Jahshiyārī, Wuzarā', p. 300; he states that the Caliph Muḥammad al-'Amīn burnt all the 'Sijillāt' of the diwān al-kharāj deliberately. Qudāma, however, does not confirm this, but refers to the dissension 'al-fitna', between the two brothers al-'Amīn and al-Ma'mūn (op.cit., p.237). This version is also given by ibn al-'Athīr, al-Kāmil fī al-tārīkh, vol. VI, p.122.

<sup>2</sup> Ibn Khurradādhbeh, Abu'l Qāsim 'Ubaīdullāh ibn 'Abdullāh, Kitāb al-masālik wa'l mamālik (1889), pp. 8-14.



the revenue. It may be said that either both of these authorities derived their information from the same official document, or perhaps ibn Khurraḍādhbeh partly depended on the information made available by Qudāma; while the differences between both of the sources reflect changes in the revenue due to complicated and inter-related factors. It can be said that ibn Khurraḍādhbeh's account could be considered as supplementary to that provided by Qudāma, and both of them established a good basis of comparison indicating the Treasury's share from the agricultural revenue. From this, it is possible to deduce the revenue from the entire province of Sawād.

Von Krenor suggests that ibn Khurraḍādhbeh's work represents the period between the years 231-250 A.H./845-6-875-4 A.D.<sup>1</sup>, while Le Strange claims that it covers the years 249 A.H./862-3 A.D., and is the copy of an official schedule.<sup>2</sup> Dūrī considers it to represent the years 272 A.H./855 A.D. and that both ibn Khurraḍādhbeh and ibn al-Faḥr probably used the book of Qudāma.<sup>3</sup> Adams refers to ibn Khurraḍādhbeh's work as a record of the Abbasid tax revenue in approximately 230 Q.H./844 A.D.<sup>4</sup> Miah

---

<sup>1</sup>Kramer, op.cit., p.13.

<sup>2</sup>Le Strange, G., Palestine, p.46.

<sup>3</sup>Dūrī, A.A., Tā'rikh al-'Irāq al-'Iqtisādī, pp. 138, 146, 189.

<sup>4</sup>Adams, R. McC., Land Behind Baghdad, Chicago (1965), p.97.

seems to accept Le Strange's suggestion and says that ibn Khurradādhbeh's figure represents the reign of the Caliph Mutawakkil.<sup>1</sup> Ibn Ḥamdūn, in his Kitāb al-Tadhkira relies upon Jahshiyārī's account when he speaks about the reign of the Caliph Harūn al-Rashīd and upon that of Qudāma when speaking of Ma'mūn's reign, but his copy is incomplete and his revenue total appears confused. He gives the revenue figures for 36 administrative sub-districts contrary to 60 sub-districts quoted by Qudāma.<sup>2</sup> His total figures for the revenue yield of the Abbasid Empire also differ; but when ibn Ḥamdūn gives the figures for the revenue of the Caliph Muqtadi's reign, he throws some light on the recovery achieved under his rule and provides information which concerns the beginning of the 4th century A.H. as compared with that of the 3rd century A.H.

Ya'qūbī, in his Kitāb al-Buldān, occasionally provides valuable information especially when he mentions the reign of the Caliph Mu'tasim.<sup>3</sup>

During his term of office, 'Alī ibn 'Īsa wrote a complete debit and credit account for the entire Abbasid Empire. He

<sup>1</sup>Miah, op.cit., p.173.

<sup>2</sup>Ibn Ḥamdūn, Abu al-Ma'ālī Muḥammad ibn Abi Ṣa'īd al Husaīn ibn Muḥammad ibn 'Alī, Tadhkirah fi'l Siyāsah wa'l 'ādab al-malakiya, (MS. No. 2948A) Ahmet III, Istanbul, fols. 186a-188a.

<sup>3</sup>Ya'qūbī, Ahmad b. Abī Ya'qūb b. Wāḍih al-Kātib, Kitāb al-Buldān, ed. de Goeje, Leyden 1892, pp. 38-39, 40-41, 258, 264.

He presents detailed figures of the revenue from Sawād province for the year 306 A.H./918 A.D.<sup>1</sup> This is made more valuable by furnishing the figures which can be contrasted with the accounts of earlier years. In editing these accounts, Von Kramer suggests that 'Alī ibn 'Īsā was forced to make this Balance Sheet in self-defence.<sup>2</sup> Zaidān accepts this unconfirmed hypothesis by Von Kramer and claims that it was included in a report submitted to the Caliph Muqtadir.<sup>3</sup> Bowen describes it as a step toward 'Alī ibn 'Īsā's financial reform which he incepted to restore the yearly balance of income and expenditure of the Abbasid government.<sup>4</sup> But whether it was a method of self-defence on the part of 'Alī ibn 'Īsā or part of his plan for financial recovery, the fact remains that it is an excellent record and most informative.

The material for the 3rd century has been made available by the works of Ibn Khaldūn, Qudāma ibn Ja'far, Ibn Khurradādhbeh ; and Ibn Hāmdūn's records are endorsed by that which Jahshīyārī has left concerning the last quarter of the second century A.H.<sup>5</sup>

---

<sup>1</sup>Kramer, A. Von, Über das Einnahmebudget des Abbasiden-Reiches vom Jahre 306, Wien, 1887, pp. 270ff; Zaidan, G., Ta'rikh al-tammaddun al-Islami, 5 vols., Cairo 1902-1905, vol. II, pp. 109-112; Durī op.cit., pp. 193-195; Samarrai, op.cit., pp. 163-4.

<sup>2</sup>Kramer, op.cit., p. 27.

<sup>3</sup>Zaidān, op.cit., vol. II, p. 109.

<sup>4</sup>Bowen, H., The life and times of 'Alī b. 'Īsā, Cambridge 1928, pp. 122-24.

<sup>5</sup>Miah, op.cit., p. 173.

The information contained in 'Alī ibn 'Īsa's Revenue Accounts and in Kitāb al-Tadhkira of Ibn Ḥamdūn for the reign of the Caliph Muqtadir reflects the situation preceding the reign of this Caliph, i.e. the financial recovery achieved under Mu'taḍid and Muktafi.<sup>1</sup>

Information concerning the revenue of part of Iraq, a'māl al-Kūfa, al-Qaṣr, Barūmā al-'a'lā and Barūmā al-asfal, is given by Ṣābī in his Tuḥfat al-Umarā' fī Tārīkh al-Wuzarā' and pictures the financial position of the Abbasid state during the reign of the Caliph Mu'taḍid and confirms the account of Ibn Ḥamdūn for the same period.<sup>2</sup>

#### The Revenue Units of the Sawād

The units of the Sawād, as already stated, are mentioned by Arabic chroniclers and represent the share of the state from agricultural revenue in addition to other taxes, or duties, paid to the Central Treasury of the state. These would include Baghdād market tax, rent of state buildings, poll tax, etc., etc.

Under the Caliph 'Omar I, the revenue for the Sawād was calculated at 128 million dirhams;<sup>3</sup> in 'Uthmān's reign the figure was

<sup>1</sup>The central treasury contained some 14 million dinars at the end of the Caliph Muktafi's reign; see Ṣābī, op.cit., p.292; Miskawāh, Abū 'Alī Aḥmad b. Muḥammad b. Yaḥyā b. 'Uqbā, Kitāb tajarib al-Umam, Cairo (1914-5), vol. V, p.238; Duri, Dirāsāt fi'l 'Uṣūr al-'Abbāsiyah al-muta'akhkhirah, Baghdad (1945), p.218.

<sup>2</sup>Ṣābī, op.cit., p.13.

<sup>3</sup>Ṣulī, Abū Bakr Muḥammad b. Yaḥyā b. 'Abdullāh b. al-'Abbās b. Muḥammad al-Baghdādī, Kitāb adab al-Kuttāb, 3 vols. (Cairo (1341 A.H.)), He gives the figures as 70,000,000 dinars for the revenue of "Sawād al-Kūfa" and states that this revenue went up to 100 million dinars

100 million dirhans.<sup>1</sup> By the end of Mu'āwīya, it became 50 million dirhans as Kharāj tax in addition to another 50 million as gifts (Hadaya) including the revenue of Ṣawāfī lands.<sup>2</sup> During the Zubayrid, the Sawād yield was 80 million dirhans as Kharāj Ṣawāfī and Hadāya.<sup>3</sup> In spite of many efforts to recultivate the land which had remained flooded since the last days of the Sassanian period, the revenue of Sawād, during the governorship of Hajjāj, had fallen as low as 25 million<sup>4</sup> dirhans. This fall in yield may also have been due to war which had broken out during the preceding period and the subsequent rough treatment of the peasants by Hajjāj, and although he adopted a better policy toward them in the later period of his term of office, the revenue collection in his last year fell to a mere 18 million dirhans.<sup>5</sup>

---

in the last year of 'Omar I's reign, vol. III, pp. 219-20; Ibn Khurradādhbeh, Abū 'l-Qasim 'Ubaidallah b. 'Abdullah, Kitāb al-Masālik wa'l Mamālik, ed. de Goeje, Leyden (1889), p.128; Muqaddasī, Muḥammad b. Aḥmad, Kitāb aḥsan al-taqāsīm fī ma'rifat laqālīm, edde Goeje (second edition), Leyden 1906, p.105.

<sup>1</sup> Ṣūlī, op.cit., vol. III, p.219.

<sup>2</sup> Ibid., pp. 219-220.

<sup>3</sup> Ibid., p.220.

<sup>4</sup> Ṣūlī, op.cit., vol. III, p.220; Ibn Khurradādhbeh, op.cit., pp. 14-15; Ibn Rustoh, Abū 'Alī Aḥmad b. 'Umar, Kitāb al-'a'lāq al-nafīsa, ed. de Goeje, Leyden 1892, p.105.

<sup>5</sup> Ibn Khurradādhbeh, op.cit., p.14; Ibn Rustoh, however, states that the figure is 16 million dirhans, 'a'lāq, p.105.

At the beginning of 'Omar II's reign the revenue rose to 80 million dirhams which, together with the gifts (Hadāya) achieved the total figure of 124 million dirhams.<sup>1</sup>

The sources of the 3rd century A.H. show the following total figures for the revenue of the Abbassids from the Sawād:<sup>2</sup>

1.	Qudāma b. Ja'far (before 204 A.H./819 A.D.)	130 million <u>dirhams</u>
2.	Qudāma ibn Ja'far (after 204 A.H./819 A.D.)	114,457,650 "
3.	Ibn Ḥardun (for the reign of Ma'mūn)	130 million "
4.	Ibn Khaldūn <sup>3</sup> (for latter days of Ma'mūn)	27,800,000 "
5.	Ibn Khurradādhbey (after 272 A.H./885 A.D.)	78,319,340 "
6.	Ibn Al-Faqīh <sup>4</sup> (for the reign of Ma'nūn)	130 million "
7.	'Alī ibn 'Īsa (306 A.H./918 A.D.)	36,723,620 "

After examining the amount paid to the Central Treasury of the Abbasid state (Bayt al-Māl al-'āmah) as kharāj or irtifa' al-kharāj it appears that all kinds of taxes were included in the revenue of the Sawād. It is possible, however, to arrive at an explanation of the differences between the two sets of figures quoted by Qudāma. That of 130 million dirhams<sup>4</sup> probably represents

<sup>1</sup> Muqaddasī, Shams al-Din Abū 'Abdullah Muḥammad b. Aḥmad b. Abi Bakr al-Banna' al-Bashshari al-Hanafi, Kitāb Aḥsan al-taqāsīm fī ma'rifat al-aqālīm, ed. de Goeje, Leyden 1906, p.133; Ibn Rusteh, op.cit., p.105; Ṣulī, op.cit., vol.III, p.220.

<sup>2</sup> Qudāma, op.cit., pp. 236-8, 242-9, 252; Ibn Khurradādhbey, op.cit., pp. 8-14; Ibn Khaldūn, Wali 'l Dīn Abū Zaid Abdul-Rahman ibn. Muḥammad ibn Muḥammad al-Tūnisi, Kitāb al-'ibar wa diwān al-mubtadā wal-Khabar (The Muqaddima), 1956-61), Beirut; Ibn Ḥardūn op.cit., fols. 186a-188a.

<sup>3</sup> Ibn Khaldūn's figure, probably, did not include the values of taxes collected in kind. In addition to the figure he mentions 200 "Najrānī" dresses and 240 ratl of "Tīn al-khatm" were collected from the Sawād

the yield of revenue from the Sawād during the early part of the reign of the Caliph Ma'mūn. In the year 204 A.H./819 A.D., the share of the state was reduced from its previous 50<sup>o</sup>/o to 40<sup>o</sup>/o of the production of the kharajī lands. Considering the sum of 130 million dirhams in the ratio of 40<sup>o</sup>/o, the total value of the Sawād agricultural produce is equal to 325 million dirhams, and the sum of 114,457,650 dirhams<sup>1</sup> at the rate of 40<sup>o</sup>/o is equal to 286,144,126 dirhams. The difference in these two figures represents the instability of the price of produce, the increase in the total revenue yield because of the newly created agricultural areas near Sāmarrā, such as "diā' Sāmarrā al-Sab'a"<sup>2</sup> in addition to 6 million dirhams collected from the population of Baṣra, "sadaqāt al 'Arab fī al-Baṣra"<sup>3</sup> Miah thought, however, that the high figures of Qudāma's revenue sheet represented the period from the latter part of the reign of Caliph Ma'mūn until that of the Caliph Mutawakkil.<sup>4</sup> Miah bases his opinion on Ya'qūbī's statement about the yield of the "Mustaghallāt" and the agricultural resources of Sāmarrā.<sup>5</sup> It would appear, however, that the share of

---

The figures of 'Alī b. 'Īsa in dirhams have been calculated from dinars for comparison.

<sup>1</sup>Qudāma, op.cit., pp. 242-249.

<sup>2</sup>Ibid., pp. 236-7.

<sup>3</sup>Ya'qūbī, Ahmad b. Abī Ya'qūb b. Waḥīh al-Katīb, Kitāb al-Buldān, ed. de Goeje, Leyden (1892), pp. 18, 38-9, 254, 258.

<sup>4</sup>Ḥabārī, Tārīkh, III, pp. 607, 1039; Qudāma, op.cit., p. 239; Ibn Khurraḍādhbih, op.cit., p. 58; Ibn al-Tiqṭīqa, Fakhri, pp. 107, 162.

<sup>5</sup>Between 204-247 A.H./ 818-861 A.D.

<sup>6</sup>Miah, op.cit. p.178

the Abbasid Government was 50<sup>0</sup>/o of the produce of Kharāji land from the time of Harūn al-Rashīd<sup>1</sup> and it continued at this rate until the year 204 A.H./819 A.D. of the Caliph Ma'mūn's reign, when he reduced it, as has been stated, to 40<sup>0</sup>/o.<sup>2</sup>

If this calculation is correct, Ya'qūbī's account of the Mustaghallāt and the agricultural resources of the Sāmarrā would increase, not diminish, the difference in the figures. It is not known whether Qudāma took account of these factors, taking into consideration that the countryside of Sāmarrā and, indeed, the town itself, were partially abandoned at the beginning of the fourth century A.H.<sup>3</sup>

The divisions of the Sawād have been thoroughly discussed in this study.<sup>4</sup> In the 3rd century A.H., it was divided into 12 districts "Istān" or "Kūra", including 60 sub-districts, "Tussūj" or "Nāhiya".<sup>5</sup>

in his financial account, however, Qudāma gives the yield from 59 of these sub-districts plus the revenue from the newly irrigated area referred to as "Sawī Nahr al-Suba",<sup>6</sup> but in ten cases he gives one figure which represents two or more adjacent districts. Qudāma's

---

<sup>1</sup>Jahshiyārī, op.cit., p.281.

<sup>2</sup>Tabarī, Tā'rikh, III, p.1039; Ibn Tabāṭabā, op.cit., p.72.

<sup>3</sup>Ma'sūdī, Murūj, vol. IV, p.96; al-Khaṭīb al-Baghdadī, Ahmad b. 'Alī, Tā'rikh Baghdad, vol. II, pp. 122-3; Ibn al-'Athīr, al-Kāmil, vol. VII, p.49.

<sup>4</sup>Supra, pp. 25-7.

<sup>5</sup>Qudāma, op.cit., pp. 234-6; Ibn Khurraḍādhbeh, op.cit., pp. 5-8; Løkkegaard, Frede, Islamic Taxation in the classic period, Copenhagen, 1950, p.164.

<sup>6</sup>Qudāma, op.cit. p.37.



figures connect the sub-districts as follows:

Barsūma, with Nahr al-Malik;

Bābil with Khatamiya;

Rūdmistān with Murmazjurd;

Upper and Lower Rādhān;

Jāzir with al-Madīnat al-ʿatīqa;

Silsil with Mahrūḍh;

Jalula with Jalulta;

Badraya with Bakasāya;

Upper, middle and lower Zāb;

The four "Tussūjes" of Kaskar district; and

The five "Tussūjes" of Dijla district.

Ibn Khurradādhbey also gives figures of the sub-districts in the same manner as Qudāma.<sup>1</sup> It would seem that Miah mistook the list.<sup>2</sup> He states that the Sawād was divided into 43 sub-units, according to Qudāma and into 41 according to Ibn Khurradādhbey.

Unfortunately, the boundaries of the division of Sawād cannot be defined, although their general location, in most cases, is fairly clear.<sup>3</sup> For lack of information concerning the areas of the different districts, it is not possible to compare their respective agricultural yields.

---

<sup>1</sup>Supra. p.289, n 5.

<sup>2</sup>Miah, op.cit., p.177.

<sup>3</sup>Adams, op.cit., p.100.

Each revenue account provided by Qudāma, Ibn Khurradādhbeh and Ibn Ḥamdūn is divided into three columns: Wheat, Barley and Sundries (cash etc.) "waraq" or dirhams, which suggests that the taxes on fields producing wheat and barley, and in a few instances rice, millet and rye, were paid direct and in kind at a fixed rate. The third column, Sundries, would include fruit trees or similar assets, in addition to any other taxes.<sup>1</sup>

The total of the revenue figures given by Qudāma and Ibn Khurradādhbeh include their estimated value of the tax yield in kind, based on current prices or values.<sup>2</sup> Ibn Khaldūn's figures for the tax yield from the Sawād seem low by comparison with those of Qudāma.<sup>3</sup> He does not seem to have included the values of the taxes collected in kind. 'Alī ibn 'Īsa's figures, however, have been calculated from 1,836,181 dinars to dirhams in the ratio of 20 dirhams per dinar for the purposes of comparison.<sup>4</sup>

After examining the total figures of all these revenue accounts concerning the Sawād, Adams says that the decline of revenue commenced with the conquest of Iraq by the Arabs and the tax yield from the Sawād as a whole indicates a decline in collection of

---

<sup>1</sup>Qudāma, op.cit., p.239; Ya'qubī, op.cit., pp. 38-9; Ibn Khurradādhbeh, op.cit., p.58.

<sup>2</sup>Qudāma, Kitāb al-Kharāj, p.339.

<sup>3</sup>Supra, p.288, n.5

<sup>4</sup>Jahshiyārī, op.cit., p.288; Dūrī, op.cit., p.222, n.1.

perhaps 30<sup>0</sup>/o between the Umayyad period and the time of Khurraḍādhbeh (i.e. 844 A.D.). He agrees, however, that much of the decline does not necessarily reflect a decrease in agricultural production so much as the increased diversion of a state revenues by corrupt civil servants and private landholders.<sup>1</sup> Von Kramer also affirmed the decline of agricultural economy, "while simultaneously the grandees of the state, and the ruling classes established for themselves widespread latifundia".<sup>2</sup> A variety of reasons have been put forward, however, concerning the diminution in agricultural production and the falling of the state revenue figures in Iraq during the 3rd century A.D.

If the 3rd century is selected as an isolated period it must be with the knowledge of the conditions which prevailed at the end of the 2nd century and by noting that the revenue yield from the Sawād during this period varied according to the strength and personality of the Caliphs, the attitude of his administrators and the problems and revolts which faced the state.

It is beyond the scope of this thesis to enumerate the difficulties and revolts facing the Abbasid Caliphate during this period, although it is worthwhile, for the purposes of this study, to summarize the principal elements of this cramd to divide them into three periods according to the general conditions of the caliphate

---

<sup>1</sup>Adams, op.cit., pp. 97-98.

<sup>2</sup>Kramer, Über das Einnahmehudget des Abbasiden-Reiches vom Jahre 306. pp. 918-919.

and especially the aspects of its commercial structure.

A brief resumé shows that during the first period, which extended from the reign of the Caliph M<sub>a</sub>'mūn to the murder of the Caliph Mutawakkil (between 197-247 A.H./813-861 A.D.) although turbulent with revolts and uprisings, the Caliphs were not only able to quell all threats to their authority, but also able to reach various levels of achievement in their economic policies. This is especially apparent in Sawād where the agricultural yield was such that it enabled them to cover the expenses of wars in addition to expenditure on buildings in the new capital. At the commencement of this period, the Caliph M<sub>a</sub>'mūn changed the share of the state from 50<sup>0</sup>/o to 40<sup>0</sup>/o and, at the end, Mutawakkil magnanimously postponed the Kharāj tax collection.<sup>1</sup>

In the second period, which lasted some nine years after the murder of the Caliph Mutawakkil (247-256 A.H./861-869 A.D.), the Abbasid caliphate lost its strength. The generals of the Turkish guards assumed an important role in the empire. Their finances depended on the yield of the S<sub>a</sub>wād as by that time most of the provinces of the Abbasid state had seceded. The agricultural situation in the Sawād was badly affected. The Turks collected the revenue for

---

<sup>1</sup>Tabarī, Tā'rikh, vol. III, p.1039.

their own benefit and did not hesitate to exact it twice in one year.<sup>1</sup>

During the third period, dating from the reign of the Caliph Mu'tamid to the end of Muktafi's reign (256-295 A.H./870-908 A.D.) the Abbasid caliphate seems outwardly to have regained its former power. The agricultural situation in Iraq reached a high peak and the Sawād, during this period, yielded a larger revenue than it had done for more than 70 years.<sup>2</sup> In the reign of the Caliph Mu'tamid, as has already been stated, a second postponement of "Iftitah al Kharāj" was made for the benefit of the farmers.<sup>3</sup>

Most of the revenue which the Abbasid caliphate had drawn from the Sawād during the third century A.H. had steadily diminished. Recurrent wars and rebellions were partly responsible but the diversion of its finance into dishonest and other channels accounts for the diminution rather than the lack of yield in the cultivated area. Such conditions, however, may not have prevailed to the same

---

<sup>1</sup>Mas'ūdī, Murūj, vol. III, p.120, vol. IV, pp. 90-91, 120, 124-5, 130-6; Ya'qubī, Ta'rikh, vol. II, p.603; Fakhri, pp. 220 239; Ibn al-'A'hir, op.cit., vol. VII, p.38; Ibn Khaldun, Kitāb al-'Ibar fī khabar man ghabar, vol. III, p.297; Bar Hebraeus, Ta'rikh mukhtasar al-duwal, p.146; al-Isfahānī, Kitāb al-aghānī, vol. XXI, p.108; Suyūṭī, 'Abdul Raḥmān ibn Muḥammad, Tarikh al-Khulafā', p.357; Ibn Taghri-Birdi, al-Nujūm al-Zahira, vol. II, p.326; Ibn al-'Imād, Shadhrat al-dhahab, vol. II, p.119; cf. Levy, R., A Baghdad Chronicle, pp. 107-14; Bowen, op.cit., pp. 4-5; Duri, Dirasat, pp. 59-74.

<sup>2</sup>Ibn Ḥamdūn, op.cit., fols. 186a-188a.

<sup>3</sup>Ibn Khurradādhbeh, op.cit., p.125.

extent in all parts of the empire and no doubt circumstances changed according to different areas. Finally, the extravagant building programmes of successive caliphs, the greed of officials who collected the tax, the looting by soldiers and the threats of external wars, all played a part in the depletion of the state's revenue.

Perhaps the best way to ascertain the effect of Sawād revenue on Abbasid activities during the 3rd century in Iraq, or in the empire as a whole, is by the study of the expenditure for state requirements and those of the administrative section which supply clarification on this point.

In each of the provinces of the Abbasid state, the dīwān al-Kharāj replaced the central Treasury. Current recurring expenditure and soldiers' salaries were deducted from Kharāj and other taxes, and the balance was sent to the central Treasury (Bayt al-mal al-amma). This practice was observed in each province of the Abbasid empire. In each district of the Sawād province, which followed a similar practice, the balance was transferred to the Dīwān al-Sawād which, in turn, forwarded it to the central Treasury. This practice continued effectively during the 3rd century A.H., even on the western side of the capital, Baghdād, which was considered as part of the Badūrya district, the same system prevailed.<sup>1</sup>

From the commencement of Abbasid government four categories of its expenditure can be traced:<sup>2</sup> military salaries, upkeep of

---

<sup>1</sup> Tabarī, Ta'rikh, vol. III, p.975; Tanūkhī, Kitāb al-Faraj ba'al-Shiddah, vol. I, p.51; Taifūr, Baghdad, pp. 62-63; Miskawih, Tajarib, vol. V, pp. 193-4; Ibn Hawqal, al-Masalik, p.28;

boundary fortresses, palace expenditure on the household and allowances to relatives and dependents of the Abbasid family.

It can be said that the Abbasid Government, during the 3rd century A.H., generally followed similar methods. Although there is much more information, spread over several sources concerning the expenditure of the Abbasid state during the latter period, the picture is still not quite clear.

Qudāma, for instance, provides some useful information about the Dīwān al-nafaqāt (expenditure section).<sup>1</sup> Šābī provides the only complete official schedule of the Abbasid Caliphate during the period under consideration.<sup>2</sup> The author of Kitāb al-Aghānī gives additional information connected with the gifts presented by some of the caliphs to various singers, poets and others.<sup>3</sup> Other sources speak about various matters concerned with expenditure problems such as the cost of creating new towns, enumerating the "Murtaziqa",<sup>4</sup> the caliphate palace servants and the guards, the number of the dependents of the Abbasid caliphate family, etc., etc.

---

Khawārizmī, op.cit., p.54. See also Moz, A., The Renaissance of Islam (1937), tr. Khuda Bukhsh and Margoliouth, pp. 76 ff.

<sup>2</sup> Tabarī, Tā'rikh, vol. III, p.444.

<sup>1</sup> Qudāma, Kitāb al-Kharāj (Ahmet III, MS), fols. 7b-8b.

<sup>2</sup> Šābī, op.cit., pp. 15-27.

<sup>3</sup> Aghānī, vol. IV, pp. 53, 79-80, vol. V, pp. 293, 303-4, 316-7, 356-8, 366, 399, 415-6, vol. VII, pp. 151-2, 156, 184-5, 196, 202, 225-6, vol. VIII, p.252, vol. IX, p.279, 283-5, 303, vol. X, pp. 58, 64, 88, vol. XI, pp. 348-9, vol. XII, pp.101-2, 106, vol. XIII, pp. 347-8, vol. XIV, p.214, vol. XVI, pp. 12, 13, 15.

<sup>4</sup> Murtaziqa and Murtaziqūn are the plurals of Murtaziq; i.e. the employee who received a fixed wage. Mafatih, p.65.

This information serves to clarify the channels of expenditure and reflects the extent of the financial responsibilities of the central treasury. In addition, it provides a basis for comparison with the amounts of revenue left from agricultural yields after the various deductions had been made.

The special expenses of the Caliph and administration were defrayed by the Dīwān al-naḥaqāt, which is also called dīwān al-ahsham. This dīwān was also divided into several "majālis" for administrative purposes.<sup>1</sup>

Several departments were established by the Abbasid administration especially to deal with agricultural activities, such as a part of Dīwān al-Kharāj, whose responsibility was, as already alluded to, mainly the supervision of land, agriculture and irrigation in addition to the assessment of taxes. Qudāma refers to "Majlis al-Kharāj" a special department which dealt with problems between both the Dīwān al-Kharāj and the military section.<sup>2</sup> The Majlis al-Kirā' provided the central government with every kind of animal required for the various needs of palace life and also controlled the supply of provender.<sup>3</sup>

The provender was, in fact, the share of the Government from produce and collected with other revenue and stored in the districts

<sup>1</sup> EI<sup>2</sup>, art. 'Dīwān'; Løkkgaard, Islamic Taxation, n.160.

<sup>2</sup> Qudāma, Kitāb al-Kharāj (MS), fol. 8b; Ṣābī, op.cit., p.9.

<sup>3</sup> Qudāma, op.cit., fol. 8a; Ṣābī, op.cit., p.177.



before being sent to its final destination to be used.

Majlis al-Khazn (storage) was responsible for the storage of wheat, barley and other produce collected as part of the taxes.<sup>1</sup>

Ṣābī, who - as has already been stated - provides the only complete list of expenditure for the Abbasid state during the 3rd century A.H., drew his information from an official document and gave detailed information concerning each item of expenditure. This, of course, attaches great importance to his work.<sup>2</sup>

It must, however, be noted that this schedule reflects only the situation during the first part of the reign of the Caliph Mu'tadid. It portrays the financial instability that faced the Abbasid state at that time in contrast to the stable period it enjoyed from the Caliph Ma'mūn's reign to the end of that of Mutawakkil. Ṣābī's figures represent the estimated dinars required for daily expenditure (Muywama)<sup>3</sup> of the Abbasid caliphate.<sup>4</sup>

By this means of detailing daily necessities, the Caliph Mu'tadid separated day to day expenditure from recurring periodic payments. In addition, this payment was beneficial to the central Treasury; for by payments on the basis of a day's work instead of

---

<sup>1</sup> Qudāma, op.cit., fol. 8b; Mez, op.cit., p.131; Løkkgaard, op.cit. p.161.

<sup>2</sup> Ṣābī, op.cit., p.15.

<sup>3</sup> Zabīdī, Tāj al-'arūs, min Jawāhir al-qāmūs, vol. IX, p.115.

<sup>4</sup> Ṣābī, op.cit., p.15.

that of a monthly sum, the treasury saved the amounts paid to the soldiers and the clerks for two days in each week (Tuesday and Friday) which saving was made by special order of the caliph Mu'taḍid.<sup>1</sup>

The categories prescribed in Caliph Maṣṣūr's testament<sup>2</sup> appear to have been followed, with the exception of "Maṣḥaḥat al-Thughūr" which seems to have been cancelled during this period, and the list can be summarised into four categories:<sup>3</sup>

i)	Military salaries ( <u>jund</u> )	4,600 dinars
ii)	Palace upkeep	1,226 "
iii)	Administration	1,035 "
iv)	Dependents ( <u>'aṭā' adh-dhuriya</u> )	120 "

The total of daily expenditure amounts to 6,981 dinars<sup>4</sup> and the total expenditure of the Abassid caliphate is 2,548,065 dīnārs. After subtracting the sum of 515,160 dīnārs, which represents a total yearly saving on an average of 4,770 dīnārs a day, the actual expenditure figure becomes 2,032,905 dīnārs. This sum, however includes 109,500 dīnārs for temporary expenditure

---

<sup>1</sup>Ibid., p.27.

<sup>2</sup>Supra, p. 295, n.2

<sup>3</sup>Ṣābi, op.cit., p.27.

<sup>4</sup>The daily expenditure, according to Ṣābi, was 7,000 dīnārs.

during a period in which the daily average was 300 dīnārs. There is no evidence of how long such expenditure continued, although it probably lasted throughout the period of the Zang revolt. Šābī's list was collated during a low financial period, and complete details of the normal expenditure do not appear. In the normal budget of the state such things as the maintenance of the holy cities, Mecca and Medīna, and the pilgrim routes leading to them; salaries of Qādīs, Muhtasibs, Aṣḥāb al-Mazalim and Aṣḥāb al-Barīd, their clerks and other employees, would be mentioned.<sup>1</sup> Such costs are mentioned in Kitāb 'inwān al-Siyar the Turkish translation of Ibn Khaldūn's history.<sup>2</sup> It seems that the manuscripts used by Turkish translators contain more detailed information than those of other existing Arabic copies. Ibn Khaldūn's information represents the early years of the 3rd century A.H. Similar costs are mentioned in the budget of 'Alī ibn 'Īsa for the year 306 A.H./918 A.D., and give a total yearly figure of 977,301 dīnārs.<sup>3</sup> Jaḥshiyārī indicates that the clerks of the Qādīs received their salaries from the central treasury. The total yearly cost of the Barīd section, according to Ibn Khurraḍādhboh, was 159,100 dīnārs.<sup>4</sup> Similar expenditure would probably occur

<sup>1</sup>Tabarī, op.cit., vol. III, p.486; Qudāma, op.cit. (MS), fols.16a-17a; Ibn Khurraḍādhboh, op.cit., p.153; Khatīb al-Baḡhdādī, op.cit., vol. I, p.79, vol. XII, p.244; 'Arīb al-Qurṭubī, Ṣilat Ta'rikh al-Tabarī (1897), p.147; Miskawāh, op.cit., vol. 5, p.209; Ibn Bassām, Kitāb Nihāyat al-rutba fi talab al-hisbah (1968), ed. Samarraī, p.15.

<sup>2</sup>Zaidan, al-Tamaddun, vol. II, p.117.

<sup>3</sup>Kramer, Einnahmebudget, p.303 ff.

<sup>4</sup>Ibn Khurraḍādhboh, op.cit., p.153; Šābī, op.cit., p.113.

throughout the remainder of the 3rd century.

In addition to the information dealing with dīwān an-naḥaḥāt and the budget of the Caliph Mu'taḥid, Arabic texts provide information concerning the expenditure made by many of the caliphs during the 3rd century A.H. They show that:

i) At the time of his arrival in Iraq, the Caliph Ma'mūn's finances were very low. This state of affairs appears to have been of short duration for expenditure during his reign shows a general increase. Many individuals were beneficiaries: his wife Būrān b. al-Ḥasān b. Sahl, his son al-'Abbās his brother al-Mu'taḥim (who afterwards succeeded him) and his father-in-law al-Hasan b. Sahl; also some of his governors, 'Abdullah b. Ṭāhir and Ḥassān b. 'Abbād; his military leader al-Ḥasan b. Quḥṭaba; singers such as Iṣḥāq b. Ibrāhīm al-Maṣṣilī, 'Alawāh and Muḥḥariq; poets, including Abū 'l 'Atāhiya, al-Ḥusain al-Ḍaḥḥāk and Maruwān b. Abī Ḥafṣ.<sup>1</sup>

Some of his expenditure covered the cost of establishing Military posts based on the frontiers of Byzantium in addition to the palace and library in Baghdad.<sup>2</sup> The two latter buildings were probably financed through "Majlis al-Binā' wa'l-Maramma" in dīwān an-naḥaḥāt

---

<sup>1</sup> Qudāma, al-Kharāj (MS), fol. 10a; Khaṭīb al-Baḥḥādī, op. cit., vol. V, p. 410, vol. IX, pp. 412, 484, vol. X, p. 190; Aghani, vol. IV, pp. 53, 79-80, 354, vol. V, p. 317, vol. VII, pp. 151-2, vol. XI, pp. 348-9, vol. XII, p. 101; Ibn al-'Athīr, op. cit., vol. VI, pp. 146-8, 162, 167.

<sup>2</sup> Khaṭīb al-Baḥḥādī, op. cit., vol. XI, p. 361; Ibn al-'Athīr, op. cit., vol. VI, p. 180.

while the rest went through the accounts of Majlis al-Hawādith in the same diwān.

The Caliph Mu'tasim was less interested in songs and poems than Ma'mūn. It appears to have been centred on building his new capital, Samarra, and on war efforts.<sup>1</sup> He concerned himself with public assistance during times of state disasters. On one occasion he gave 5 million dirhams as indemnity for fire damage in Baghdād, and at his death he left 10 million dīnārs.<sup>2</sup>

During the reigns of the caliphs al-Wāthiq and al-Mutawakkil, particularly during that of the latter a higher status was given to singers, poets and other artists who proffered their efforts for financial reward. The more effusive the laudation given by a singer or poet to some notable personage or event, the higher their reward for such eulogy, and the emptier became the coffers of the state!<sup>3</sup> Mutawakkil, however, built his new residential area to the north of Samarra, in the Mahuza district on which - according to Ṭabarī - he spent more than 2 million dīnārs.<sup>4</sup>

---

<sup>1</sup> Ṭabarī, op.cit., vol. III, p.1326; Ibn al-'Athīr, op.cit., vol. VI, p.184; al-Dhahabī, Duwal, vol. I, p.103.

<sup>2</sup> Khatīb al-Baghdādī, op.cit., vol. IV, p.149.

<sup>3</sup> Ṭabarī, op.cit., vol. III, pp. 1368-70; Khatīb, al-Baghdādī, op.cit., vol. I, p.100, vol. IV, pp. 146-7, vol. VI, p.368, vol. VII, pp. 166-8, vol. XIII, p.196; Aghani, vol. V, pp. 356-8, 415-6, vol. VII, p.156, 196-202, 225-6, 252, vol. IX, pp. 279, 283-5, 298, vol. X, p.64, vol. XIV, p.213.

<sup>4</sup> Ṭabarī, III, 1438; Ibn al-'Athīr, vol. VII, p.33.

Confiscations and extortions (musādara) became more frequent during the reigns of both these caliphs and this, together with the information extant concerning expenditure, emphasises the financial instability of the time.<sup>1</sup> The sufferers from confiscations and extortions (al-musādarūn) were usually those who possessed considerable wealth and held important posts in the state's administrative regime.<sup>2</sup>

This policy, although most unfair to the individuals concerned, yet had an advantage in reducing individual wealth and circulating it - which is always an asset to public interests.

ii) During the period when the caliphate was subordinate to the Turks, the central treasury was abandoned.<sup>3</sup> All taxes and confiscated monies and properties were divided between the generals of the Turkish guards. No forts were built and no improvements of any kind were made. The soldiers were the main drain on public expenditure. Tabarī refers to the estimated salaries of military detachments as the caliphate guards alone, in the year 252 A.H./ 866 A.D., as 200 million dīnars.<sup>4</sup> Tabarī somewhat sarcastically

---

<sup>1</sup>Tabarī, III, pp. 1335, 1374, 1377-8, 1410-11, 1421, 1445; Mas'ūdī, Murūj, Vol. VII, pp. 214, 228; Ya'qūbī, Tā'rikh vol. II, pp. 592-3, 597, 600; Ibn al-'Athīr, op.cit., vol. VII, pp. 4, 28, 43, 46-7; Ibn Khaldūn, al-'Ibar, vol. III, p.269; Ibn Khillikān, Tafaīāt al-a'īan, vol. I, p. 188, vol. III, p.61; Dhahabī, Duwal, vol. I, pp. 112-3.

<sup>2</sup>Tabarī, vol. III, pp. 1374, 1421; Ibn al-'Athīr, vol. VII, p.4; Bar Hebraeus, Tā'rikh, p.256; Dhahabī, vol. I, pp. 103, 112-13.

<sup>3</sup>Tabarī, vol. III, p.1720; Ibn al-'Athīr, vol VII, p.54.

<sup>4</sup>Tabarī, vol. III, p.1685.

speaks of this sum as being "the equivalent of the whole revenue of the state for two years".<sup>1</sup> It would seem, however, that this figure reflects an increase in the number of such detachments. Musta'in (248-252 A.H./862-866 A.D.) in his remonstrance to the Turkish guards in 215 A.H./865 A.D., refers to the generosity which elevated 2,000 of their boys to the rank of soldiers and 4,000 of their girls to the status of married women.<sup>2</sup> This probably signifies that Turkish married women had a special allowance.

Later, the Caliph Musta'in returned to Baghdād and again made it the capital of the caliphate. He spent 330,000 dīnārs to fortify its ramparts as a line of defence against the Turks.<sup>3</sup>

Ṭabarī affirms that during the siege of Baghdād in 251 A.H./865 A.D., provisory conditions concerning the revenue of the state were made between the heads of the opposing forces. By this treaty 80,000 dīnārs were allocated to the Caliph Musta'in in return for his promise to abdicate. Two thirds of the remainder was allocated to the Turkish forces of Sāmarrā' and one third to the military forces of Baghdād.<sup>4</sup>

---

<sup>1</sup>Ṭabarī, vol. III. p.1685.

<sup>2</sup>Ibid., vol. III, p.1682; Ibn al-'Athīr, vol. VII, pp. 54-55

<sup>3</sup>Ibid.

<sup>4</sup>Ṭabarī, vol. III, p.1640.

Ibn al-Faqīh states that during the reign of the Caliph Mu'tazz (252-255 A.H./866-869 A.D.) the Qur'ān readers of Baṣra, "al-Qurrā'", received their payment from the diwān in the capital, Sāmarrā'.<sup>1</sup>

Ṭabarī mentions that Mu'taz's mother drew the sum of a million dīnārs yearly from the revenue of the state. After murdering her son, the Caliph Mu'taz, the Turks confiscated all her property and wealth.<sup>2</sup>

Muhtadī (255-256 A.H./869-70 A.D.), who was caliph in name only, requested the Turks merely for enough food for him and his relatives.<sup>3</sup>

All these incidents confirm that the whole state revenue had become, in this period, absorbed by the Turkish militia.

iii) The central treasury of the Abassid state was empty at the beginning of the Caliph Mu'tamid's reign (256-279 A.H./870-892 A.D.) and he was forced to request a loan from some tradesmen.<sup>4</sup> Later, it would seem that the position had changed. For instance, the author of Kitāb al-Aghānī relates that 1,000 high quality dresses were sent by Mu'tamid to a favourite lady singer.<sup>5</sup> Another source

---

<sup>1</sup>Ibn al-Faqīh, Buldān, p.118; also, Jahshiyārī, p.113.

<sup>2</sup>Ṭabarī, vol. III, p.1720; Ibn al-'Athīr, vol. VII, p.78; Bar Hebraeus, pp. 256-7.

<sup>3</sup>Ṭabarī, vol. III, p.1720.

<sup>4</sup>Khatīb Baḡhdādī, vol. III, pp. 205-6.

<sup>5</sup>Aghānī, vol. XVI, p.15.



however, states that towards the end of Mu'tamid's reign his vizier, Ismā'īl ibn Bulbul exacted the revenue of the S<sub>a</sub>wād twice in one year (277 A.H./890 A.D.).<sup>1</sup>

In addition to the evidence of Šabī concerning the budget of the Caliph Mu'taḍid, Ṭabarī, Ma's'udī and Iṣfahanī, amongst others, provide information of Mu'taḍid's reign. Ṭabarī says that the Dujaīl canal was dredged in the year 283 A.H./896 A.D. at a cost of 4,000 dīnārs.<sup>2</sup> In the year 288 A.H./901 A.D., the Caliph Mu'taḍid sent ten million dirhams to the governor in Khurāsān to be distributed among the soldiers of certain military divisions there.<sup>3</sup> Ṭabarī, however, contradicts his previous account by stating that other information revealed the sum of 10 million dirhams was ordered by the caliph, 3 million of which were sent from the treasury in Baghdād and letters were sent to governors in the western provinces ordering them to hand the balance, 7 million dirhams, to his messenger.<sup>4</sup> There is, however, evidence that one million dirhams had been sent yearly to the governor of Khurāsān from the central government, which indicates that it was traditional to remit this sum frequently.<sup>5</sup>

---

<sup>1</sup>Bowen, op.cit., p.29.

<sup>2</sup>Ṭabarī, vol. III, p.2153.

<sup>3</sup>Ibid., vol. III, p.2204.

<sup>4</sup>Ibid., pp. 2204-5.

<sup>5</sup>Ibn al-'Athīr, op.cit., vol. VI, p.148; Ṭāifūr, op.cit., p.32.

Ṭabarī relates that on the occasion of the appointment of Ṭāhir ibn al-Ḥusayn as governor of Khurāsān by the Caliph Ma'mūn in the year 205 A.H./820 A.D., Ṭāhir was encamped with his soldiers near : Baghdād. The "million dirhams which were always sent to the governor of Khurāsān were carried to him as was the custom".<sup>1</sup>

The origin of this custom is outside the scope of this thesis and is contrary to the figures given in the estimates of the Abassid provinces or those of the central treasury. There is no information with which to clarify the reason for sending such a sum.

Both Mu'taḍid and Muktafī gave their attention to building and, according to Mas'ūdī, both of them left reasonable sums of money for the benefit of the central treasury.<sup>2</sup> Such information reflects improvement in the budget of the state rather than the limitation of expenditure.

It is noteworthy that the revenue yield of Iraq represents an important figure when compared with that of the other provinces. It is certainly true that during a short period of the 3rd century A.H., Iraq was the only source of revenue of the Abbasid state. Excluding this period, the revenue of Iraq, and especially that from agriculture, was the most important asset of the Abbasids.

---

<sup>1</sup>Ṭabarī, vol. II, p.1043.

<sup>2</sup>Mas'ūdī, Murūj, vol. VIII, pp. 215, 225-6.

BIBLIOGRAPHY

1. Manuscripts
2. Published Literary Sources
3. Modern works:
  - a) Books
  - b) Articles in Periodicals.

The initials indicate the Manuscripts with which they are concerned:

A III	Ahmad III Library, Istanbul
BM	British Museum
Br.L.	Berlin Library, Germany.
BL	Bodleian Library, Oxford
Bib.Nat.	Bibliothèque Nationale
HIL	Higher Islamic Institute Library (Baghdad)
KL	Köprülü Library, Istanbul
PL	Rāgib Pasha Library, Istanbul
TS	Topkapı Library, Istanbul
UPP	Uppsala Library, Sweden
VL	Vallyudin Bayazid Library, Istanbul
<u>SH.L.</u>	Şehit Ali Paşa Library, Istanbul
LL	La Lali Library, Istanbul
Ay. S	Aya Sofya Library, Istanbul.

1. Manuscripts

Ibn al-Abbar, Muḥammad b. 'Abdallāh (d.658/1260),

I'tāb al-Kuttāb (MS. B.M., No. Or.6641)

Ibn 'Abd Rabbah, Abu 'Amr (d.328/938), Ta'rīkh al-Khulafā',

(MS. Sh.L., No. 1850), Istanbul.

Anonymous

Kitāb Akhbār al-'Abbās wa Wilā'ihī,

Manuscript preserved in the Institute

of Higher Islamic Studies, Baghdad

University.

Anonymous

Kitāb Falḥ al-Nabāt (MS. LL. No. 1990),

Istanbul.

Anonymous

Kitāb al-'Ilm az-Zākhir fī akhbār al-

awā'il wa'l-awākhir (MS. All, No. 2959),

Istanbul.

Anonymous

Kitāb al-Jaḡhrāfiya fī Ṣifāt al-aqālīm

(MS. B.M. No. Add. 25,745).

Anonymous

Kitāb Ṣifāt al-aqalim (MS. All,

No. 3102), Istanbul.

Anonymous

Tā'rīkh al-dawla 'l-'Abbasiyya

(MS. VL. No. 2360) Istanbul.

Anonymous

Kitāb Tuḥfat al-'ajā'ib wa ṭurfat

al-gharā'ib (MS. B.M., No. Add. 23, 384).

Anonymous

Al-'Uyūn wa'l hadā'iq fī 'l-akhbār wa'l-

haqā'iq (MS. Br.L. No. 9419, We342)

Berlin.

Ibn al-‘Awwān, Abu Zakariyyā Yahyā b. Muḥammad b. Aḥmad,

Kitāb al-Filḥa (MS. B.M., No. Or 21.AK).

al-Azdī, Abu al-Ḥasan ‘Alī b. Zāfir (d. 623/1226),

Kitāb Akhbār al-duwal al-munqaṭi‘a  
(MS. B.M. No. Or.3685).

al-Azdī, Abu Zakariyyā’ Yazīd b. Muḥammad (d. 334/945),

Ta’rīkh al-Mūsīl, vol. II (MS. Chester  
Beatty Library, No. 3030) Dublin. An  
identical photographed copy of this  
manuscript is preserved in the library  
of the School of Oriental and African  
Studies. (No. S.G.VIII.163)

‘Azīmī, Muḥammad b. ‘Alī, Ta’rīkh al-‘Azīmī (MS. VL.No. 398).

Inn Bassām, Muḥammad b. Aḥmad, Nihayat al-rutba fī talab al-hisba,  
(MS. AIII, No. 2304, ad.20).

Būzjānī, Abū al-Wafā’ (328-381/939-997).

Kitāb al-Ḥawī li’l-a‘māl as-Sulṭāniyya  
wa rusūm al-hisāb ad-dīwāniya (MS.  
Bib. Nat. No. arabe, 2462).

Hamadānī, Abu Muḥammad al-Ḥasan b. Aḥmad b. Ya‘qūb al-‘Abdī

al-Bakīlī, Kitāb al-Jawharatāin al-  
‘atīqatāin al-mā’i‘atāin min as-Safra’  
wa’l-baīdā’ (MS. Upp. No. Obibl n.551).

Ibn Ḥamdūn, Abū ‘l Ma‘ālī Muḥammad b. Abī Sa‘īd al-Ḥusain b.

Muḥammad b. ‘Alī (d. 562/1167),  
Tadhkira fi’l Siyāsa wa’l-‘adāb al-

malakiya (MS. AIII. Nos. A2948/6,  
A2948/3, Nos. A.2948/1, 3, 6, 9, 10, 12;  
MS. R.L. nos. 1079, 1080, 1081, 1082,  
1083, 1084, 1085; DM. Nos. Or.3179,  
Or.3180).

al-Ḥarrānī, Kitāb al-Rutba fī amr al-Hisba (MS. AIII, No. 2479).

al-Ḥasanī, Kitāb al-Barq al-lāmi' fī al-tā'rikh al-Jāmi'  
(MS. Berlin, No. 9488, We.345).

al-'Askarī, Abu Hilāl (d. about 395/1004), Kitāb al-'Awā'il,  
(MS. Bib. Nat. No. Arabe 5986).

al-'Idrīsī, al-Sharīf, Nuzhat al-mushtāq ilā ikhtirāq al-'afāq  
(MS. Ay.S., No. 1960).

Jāhiz, Abū 'Uthmān 'Amr b. Baḥr (d. 255/868), Kitāb Tanbīh  
al-Mulūk wa'l-makā'id (MS. KL. No.  
'adabīyāt 1065).

Jirāb al-dawla, Abū 'l-'Abbās Aḥmad b. Muḥammad b. 'Allawāih al-  
Shajarī, Kitāb Tarwīh al-arwāh wa  
miftāḥ al-Surūr wa'l-afrah (MS.).

Preserved in the Institute of Higher  
Islamic Studies, Baghdad University.

Qudāma b. Ja'far, Abū'l-Faraj Qudāma b. Ja'far b. Qudāma al-  
Kātib al-Baghdādī (250/864-320/932),  
Kitāb al-Kharāj wa ṣan'at al-Kitāba  
(MS. Köprülü Library, No. 1076). A

copy of the manuscript, prepared for the  
orientalist Ch. Schefer in calligraphy

about a hundred years ago; the copy is in the Bibl. Nat. Paris classified as Arabe No. 5907. A photostat from the copy is in Dār al-Kutub al-Miṣriyya under No. 1971, fiqh Ḥanafī.

Ibn Rajab Abu 'l-Faraj Shihab al-Dīn Abi 'l-'Abbās Aḥmad,  
Kitāb al-Istikhraj li-Aḥkām al-Kharāj  
 (MS. Bibl. Nat. No. Arabe 2454, R.8, 842).

Ibn Taghribirdī, Abu 'l-Maḥāsin Jāmal al-Dīn,  
Kitāb Mawrid al-Laṭāfa fī man Walīa as-Saltana wa 'l-Khilāfa (MS. Aya Sofya, N. 3488).

Ibn Taīfur, Aḥmad b. Abī Tāhir (d. 280/893),  
Kitāb Baghdād (MS. B.M. No. Add. 23318).

Ibn Waḥshiyya, Abū Bakr Aḥmad 'Alī b. Qaīs al-Kasadānī al-Qaīsī, Kitāb al-Filāḥa al-Nabaṭiyya  
 (MSS. VL. No. 2485; B.L. Nos. Hunt 340, Hunt 326, Beyazid No. 4064.)

al-Warrāq, Kitāb al-Ṭabīkh (MS. B.L. No. Hunt 187).

## 2. Published Literary Sources

Ibn al-Abbār, Muḥammad b. 'Abdallāh (d. 658/1259),  
I'tāb al-Kuttāb ed. by S. Ashtar,  
 Damascus, 1961.

Ibn Abd Rabbih, Ahmad b. Muhammad (d. 328/940),

al-'Iqd al-farīd, Cairo, 1940.

al-Abshīhī, Muhammad b. Ahmad, al-Mustatraf min Kulli fannin

mustazraf, 2 vols., Bulāq, 1268 A.H., Cairo.

-----  
al-Mustajād min fi'lat al-ajwād.

Ibn 'Adhārī, Abu 'Abdallāh Muhammad al-Murakishī (7th.C./

13th C.), al-Dayān al-Mughrib, Leyden,

1948-51.

Ibn al-'Adīm, Kamāl 'l-dīn Abū 'l-Qāsim, 'Umar b. Ahmad

(l. 660/1262), Zubdat al-halab min ta'rīkh

Halab, Damascus, 1951-4.

'Arīb al-Qurṭubī, 'Arīb b. Sa'd (d.370/980),

Ṣilat ta'rīkh al-Ṭabarī, ed. de Goeje,

Leyden, 1897.

al-Ash'arī, Sa'd b. 'Abdallāh al-Qurṣī (d.301/913),

Kitāb al-Firaq wa'l-maqālāt, Tehran, 1963.

Ibn al-Athīr, 'Alī b. Muhammad b. Muhammad b. 'Abd 'l-

Karīm al-Shaībānī (d. 630/1232),

al-Kāmil fī 'l-Ta'rīkh, Azhariyya

Press, Cairo, 1301 (Reference to this);

Leyden, 1851-76.

-----  
Kitāb al-Lubāb fī tahdhīb al-ansāb, 3 vols.,

Cairo, 1357.

Ibn al-'Awwam, Abu Zakariyya Yahyā b. Muḥammad b. Ahmad,

Kitāb al-Filāha, 2 vols., Madrid, 1802.



al-Azdi, Abū Zakariyā' Yazīd b. Muḥammad b. 'Iyās b. al-Qāsim,  
Ta'rīkh al-Maṣil, Cairo, 1968.

al-Azdi, Muḥammad b. Aḥmad al-Baghdādī, Hikayat Abū'l-Qāsim,  
 ed. Mez., Heidelberg, 1902.

al-Baghdādī, 'Abd 'l-Qāhir b. Tāhir (d.204/819),  
Kitāb al-Farq bain al-firaq, Cairo,  
 1328/1910.

al-Baiḥaqī, Abū 'l-Faḍl Muḥammad b. al-Husain al-Baiḥaqī  
 (d. 1077 A.D.), Ta'rikh-i Baihaq,  
 ed. by Fayyāz, Tehran, 1324.

al-Baiḥaqī, 'Alī b. Zaid al-Khurāsānī, Tatimmat Siwān al-  
Hikma, ed. by Muḥammad Shafī', Lahore,  
 1935.

al-Baiḥaqī, Ibrāhīm b. Muḥammad, al-Maḥāsin wa'l-masāwī',  
 Leipzig, 1900-2; also Cairo, 1906.

Ibn al-Baiṭār, Kitāb al-Mufrādat

al-Bakrī, 'Abdallāh b. 'Abd 'l-'Azīz (d. 487/1094),  
Mu'jam ma Ista'jam, 4 vols., ed. by  
 M. al-Saqqa, Cairo 1947-1951.

al-Balādhurī, Aḥmad b. Yahyā b. Jābir (d. 279/892),  
Ansāb al-Ashraf, vol. XI, Greifswold,  
 1883; vol. IVB, ed. by Max Schoessinger,  
 Jerusalem, 1938; vol. V, ed. by Goitein,  
 Jerusalem, 1936.  
 ---  
Futūh al-Buldān, Leyden, 1866; Cairo 1956.

Ibn al-Balkhī, Fārsnāma, ed. Le Strange and R. Nicholson,  
GMS, London, 1921.

Bar Hebraeus, Gregory Abu'l-Farāj (d. 865/1286),  
The Chronography, ed. and trans. from  
Syriac by E.A. Wallis Budge, London, 1932.

----  
Ta'rikh mukhtasar al-duwal, Beirut, 1890.

Ibn Bassām, Muḥammad b. Aḥmad, Nihāyat al-rutba fī ṭalab  
al-hisba, ed. H. El Samarraï,  
Baghdad, 1968.

Ibn al-Baṭṭīq, Sa'id b. al-Baṭṭīq, Annalis, ed. Lewis Shikhi,  
Beirut, 1905.

Ibn Baṭṭūṭa, Muḥammad b. 'Abdallāh (d. 779/1377),  
Rihlat ibn Baṭṭūṭa, Beirut, 1960.

Bīrūnī, Abu 'l-Riḥān Muḥammad b. Aḥmad,  
al-'Āthar al-Bāqiya 'an 'l-qurūn  
al-Khāliya, Leipzig, 1878 A.D.

----  
al-Jamāhir fī ma'rifat al-Jawāhir  
Hyderabad 1355 A.H.

----  
El-Bīrūnī's India, trans. E.C. Sachau,  
2 vols., London, 1888.

al-Buḥturī, Walid b. 'Ubaid (d. 284/897),  
Dīwān al-Buḥturī, 2 vols. Istanbul,  
1300-1; ed. al-Ṣairafī, Cairo, 1963.

Benjamin of Tudela (completion of the journey on 1173 A.D.),  
The Itinerary. Trans by A. Asher, London  
and Berlin 1940.

Damīrī, Ḥayāt al-Haiwān, 2 vols., Būlāq, Cairo, 1284 A.H.

Dhahabī, Shams 'l-Dīn Abī 'Abdallāh Muḥammad b. Aḥmad

(d. 746/1346), Duwal al-Islām,

2 vols., Hyderabad, 1337 A.H.

---- Tadhkirat al-ḥuffāz, Hyderabad,

1333 A.H.

---- al-Mushtabih fi 'l-rajal, 2 vols.,

Cairo, 1962.

---- Siyar A'lām al-Nubalā', Cairo, 1956-7.

---- al-'Ibar Fī Khabar man Ghabar,

3 vols., ed. Munajjid and Sayyid,

Kuwait, 1960-1966.

al-Dīnashīrī, Abu 'l-Faḍl Ja'far b. 'Alī, al-Ishara ila maḥāsin

al-tijara wa ma'rifat Jayyid 'l-a'rāḍ

wa radiyha wa ghushūsh al-mudallisīn

fīhā, Mu'ayyad Press, Cairo, 1318 A.H.

al-Dīnawarī, Abu Ḥanīfa Aḥmad b. Dā'ūd (d. about 282/860-1),

Kitāb al-Nabāt (Part of the alphabetical

section) ed. Brønhard Lewin, Uppsala, 1953.

---- Kitāb al-Akhbār al-Tiwāl, ed. Kratchkovsky,

Leyden, 1912.

Dionysius, Chronique de Denys de Tell Mahré, Trans. J.B. Chabot,

Paris, 1895.

Diyārbakrī, Ta'rīkh al-Khanīs, Cairo, 1283 A.H.

Ibn Duraid, Muhammad b. al-Hasan (d. 321/933),

Kitab al-Ishtiqāq, ed. A. Harūn, Cairo

Rihlat ibn Fadlān<sup>8</sup>.

Ibn Fadlān, Rihlat ibn Fadlān, ed. M. Fren, Leningrad, 1938.

Ibn al-Faqih, Abu Bakr Ahmad b. Muhammad al-Hamadani

(d. 365/975), Kitab al-Buldan, ed.

de Goeje, Leyden 1885.

Abu 'l-Fida, Isma'il b. 'Ali (d. 732/1331),

Taqwīm al-Buldan, ed. M. Reinand and

M. de Slane, Paris, 1840.

Ibn al-Fuwatī, al-Hawadith al-Jami'a, ed. M. Jawad, Baghdad,

1351 A.H.

---

al-Mukhtasar al-Muhtaj 'ilaih min

ta'rikh Baghdad, ed. M. Jawad, Baghdad,

1954.

Ibn Abi 'l-Hadid, 'Abd 'l-Hamid b. Hibat 'l-lah (d. 655/1258),

Sharh Nahj al-Balaghah, Cairo, 1329/1911.

Ibn Hajar, Muhammad b. Ahmad (d. 852/1448), Lisān al-mizān,

Hyderabad, 1329.

Hajj Khalifa, Kashf al-Zunūn 'an asāmī 'l-Kutub wa'l funūn,

ed. Gustavus Fluegel, Leipzig, 1837.

Ibn 'Abd 'l-Hakam, 'Abd al-Rahman b. 'Abdallah (d. 242/858),

Futuh Misr, Algiers, 1947.

Hamadalla Mustawfi al-Qazwini (d. 740/1340), Nuzhat al-Qulub,

trans by Le Strange, GMS, 1919.

Hamadānī, Badī' al-Zamān, Maqānat, ed. M. 'Aqaw, Beirut, 1889.

-----  
Rasā'il, Tarabulsī, Beirut, 1921.

al-Hamdānī, al-Ḥasan b. Aḥmad (d. 334/945),

Sifat Jazīrat 'l-'Arab, Leyden, 1844.

-----  
al-Jawharatān al-'Atiqatān al-  
mā'i'atān min al-Safrā' wa'l-baīdā',  
 ed. C. Toll, Uppsala, 1968.

al-Hamdānī, Muḥammad b. 'Abd 'l-Malik (d. 521/1127),

Takmilat Ta'rīkh al-Ṭabarī, ed. A. Kan'an,  
 Beirut, 1959.

Ḥanẓa al-Iṣfahānī, Abu 'Abdallāh Ḥanẓa b. al-Ḥasan

(d. 360/970), Ta'rīkh Sinī Mulūk al-Ard  
wa'l-Anbiyā', Leipzig, 1844.

al-Ḥarīrī, al-Qāsim b. 'Alī (d. 516/1122),

Maqānat al-Ḥarīrī, Beirut, 1903.

Ibn Hawqal, Abu 'l-Qāsim Muḥammad al-Hawqalī al-Baḡhdādī

(d. 367/977), Kitāb al-Masālik wa'l-manālik,  
 ed. de Goeje, Leyden, 1873.

-----  
Ṣūrat al-ard, 2 pts. (2nd edition),  
 ed. J.H.Kramers, Leyden, 1938-1939.

Ibn Ḥazm, Abu Muḥammad 'Alī b. Aḥmad (d. 456/966),

Jamharat ansāb al-'Arab, ed. A. Ḥarūn,  
 Cairo, 1962.

-----  
Kitāb al-faṣl fī'l-milal wa'l-nihal.

al-Ḥubaiṣhī, al-Baraka fī fadl al-Sa'ī wa'l-haraka, Cairo,

1308 A.H.

Hudud al-'ālam, ed. F. Minorsky, Oxford, 1937.

al-Ḥurawī, 'Alī b. Abī Bakr (d. 661/1215), al-Ishārāt ilā

ma'rifat al-Zitarāt, ed. J. Sourdél-Thomine,

Damascus 1953.

al-Ḥuṣarī, Zahr al-adab, 4 vols., Cairo, 1925.

Ibn al-'Ibrī, see Bar Hebraeus.

al-Iṣfahānī, Abu 'l-Faraj 'Alī b. al-Ḥusain (d. 365/975),

Kitāb al-Aghānī, 20 vols., Būlāq,

Cairo, 1285 A.H.; vol. 21, Leyden, 1888;

21 vols., Dar al-Kutub al-Miṣriyya,

Cairo 1931-1950, Index, Leyden 1900.

----

Maqātil al-Talibiyyīn, Najaf, 1965.

Iṣbahānī, Abu Nu'aim Aḥmad b. 'Abd. llāh (d. 430/1039),

Hilyat al-Awliyā', Cairo, 1938.

----

Kitāb dhikr akhbār Iṣbahān, Leyden, 1931.

Iṣṭakhṛī, Abu Iṣḥāq Ibrāhīm b. Muḥammad al-Fārisī al-Karkhī

( 346/957), Kitāb Masālik al-ma'ālik,

ed. de Goeje, Leyden, 1870.

----

Kitāb al-Aqālīm, Gotha, 1839.

Ibn IYās, Muḥammad b. Aḥmad, Bada'i' al-Zuhur fī waqa'i' al-duḥur,

1st ed. al-Maṭba'a 'l-Kubrā, Bulaq,

Cairo, 1311 A.H.

Ibn Isfindiyyār, Muḥammad b. al-Ḥasan, Tā'rikh-i Tabaristān,

Tehran, 1942, Trans. by E.G. Browne

London, 1950.

al-Jāḥiẓ, Abu 'Uthmān 'Amr b. Daḥr al-Baṣrī (d. 255/868),

al-Bayān wa'l-Tabyīn, 4 vols., ed.

Abd 'l-Salam Ḥarūn, Cairo 1367/1948.

--- al-Dalā'il wa'l-I'tibār fi'l-khalq wa'l-

Tadbīr, ed. R. Ṭabbākh, Aleppo, 1928.

--- al-Bukhalā', ed. T. al-Ḥajirī, Dar

al-Kātib al-Miṣrī, Cairo, 1948.

--- Majnu'at Rasā'il, ed. Sāsi al-Maghribi,

Cairo, 1908.

--- al-Maḥasin wa'l addād, ed. van Volten,

Leyden, 1898.

--- Thalāth Rasā'il, ed. de Goeje, Leyden

1903; also ed. Finkel, Cairo, 1929.

--- Rasā'il, ed. Sandūbī, Cairo, 1903.

--- Kiṭāb al-Tabassur bi'l Tigāra,

(attributed to Jāḥiẓ), ed. H.H. 'Abd 'l-

Wahab, Dar al-Kitāb al-Jadid, Cairo, 1966.

--- Kiṭāb al-Taj fī akhlāq al-Mulūk

(attributed to Jāḥiẓ), ed. A. Zakī,

Cairo, 1914.

al-Jahshiyārī, Muḥammad b. 'Abdūs (d. 331/942), al-Wuzarā'

wa'l-kuttab, ed. M. al-Saqqa, Cairo, 1938.

Ibn al-Jawzī, Abu'l-Faraj 'Abd 'l-Rahmān b. 'Alī

(d. 597/1200), al-Muntazam, vols. V-X,  
Hyderabad, 1938-43.

---- Manāqib Baghdād, ed. 'Atharī, Baghdad,  
1341 A.H.

---- Kitāb al-Adhkiyā', Beirut, 1965.

---- Kitāb Saīd al-Khaṭir, ed. Ali Tanṭāwī,  
Damascus, 1960.

---- Akhbār al-Zurafā' wa'l mutamājinīn,  
Beirut.

---- Talbīs Iblīs, Cairo, 1341 A.H.

Jawālīqī, Mawhūb b. Aḥmad (d. 539/1200), al-Mu'arrab min al-  
Kalām al-a'jani, ed. A.M. Shākir, Cairo,  
1361 A.H.

Ibn Jubayr, Rihla ibn Jubayr, ed. de Goeje, Leyden 1907.

Ibn Kathīr, Ismā'īl b. 'Umar (d. 997/1372), Kitāb al-Bidāya wa'l-  
Nihāya, 14 vols., Cairo 1932.

Khafājī, Shafā' al-ghalīl, Cairo, 1325 A.H.

Ibn Khaldūn, 'Abd 'l-Rahmān b. Muḥammad (d. 804/1406),  
Kitāb al-'Iṣar, 7 vols., Beirut, 1959-1961.  
---- al-Muqaddina, Beirut, 1886.

Kalīfa b. Khayyāṭ (d. 240/854), Tabaqāt, 2 vols., ed. S. Zakkār,  
Damascus, 1966-7.



- Ibn Khallikān, Abu 'l-'Abbās Aḥmad b. Muḥammad (d. 681/1282),  
Wafayāt al-A'yān, 2 vols., Cairo 1299/  
 1882, vols. 1-6 (incomplete), Cairo 1963;  
 another ed. by M.M. 'Abd 'l-Harīd,  
 trans. by de Slane, 4 vols., Paris 1842-71.
- al-Khaṭīb, Abu Bakr Aḥmad b. 'Alī (d. 463/1070), Tā'riḫ Bagḥad  
 14 vols., Cairo, 1931.
- al-Khawārizmī, Abu 'Abdallāh Muḥammad b. Aḥmad (d. 376/895),  
Maḥatib al-'Ulūm, ed. van Vloten, Leyden,
- Ibn Khurraḍādhbeh, Abu 'l-Qāsim 'Ubaīdallāh b. 'Abdallāh  
 (d. about 300/912), Kitāb al-Masālik wa'l  
Manālik, ed. de Goeje, Leyden, 1889.
- al-Kindī, Muḥammad b. Yūsuf (d. 350/961), Kitāb al-'urara'  
(al-Wulāt) wa Kitāb al-Qudāt,  
 Leyden, 1912.
- Kitāb al-Qudāt, Paris, 1908.
- al-Kishshī, Muḥammad b. 'Umar (d. 4th/10th c.), Ma'rifat akhbār  
al-rijāl, Najaf, 1964.
- al-Kutubī, Muḥammad b. Shākir (d. 764/1363), Fawāt al-Wafayāt,  
 2 vols., Cairo, 1283 (Bulāq ed.).
- al-Ma'arri, Abu 'l-'Alā', Saḡṭ al-Zand, Cairo, 1901.
- Rasā'il al-Ghufran, Cairo, 1938.
- al-Maīdānī, Aḥmad b. Muḥammad, Majra' al-anthāl, 2 vols,  
 Cairo, 1284.

Ibn Māja, Kitāb al-Sunan, Cairo, 1313/1896.

Ibn Manẓūr, Abu 'l-Faḍl Muḥammad b. Mukarramī al-Afrīqī

(d. 711/1311), Lisān al-'Arab,

20 vols., Dār Ṣādir, Beirut, 1955.

al-Maqrīzī, 'Aḥmad b. 'Alī (d. 845/1441),

al-Mawā'iz wa'l-I'tibar bi-dhik al-Khuṭaṭ  
wa'l-'Athār, 4 vols., Cairo 1906-1908.

--- Ighāthat al-Umma bi-kashf al-ghumma,  
ed. M. Ziyada and J. al-Shayyāl, Cairo,  
1940.

--- Shudhūr al-'Uqūd, ed. E. Karmalī,  
Cairo 1939.

---- Kitāb al-Sulāk fi ma'rifat duwal al-  
Mulūk, 6 vols., ed. M. Ziyad, Cairo,  
1934-1942.

--- Itti'āz al-Ḥunafa, Leipzig, 1909.

Marwazī, Sharaf al-Zaman, Fī 'l-Sīn Wa'l-Turk wa'l-Hind,

Arabic text with English trans., by

Minorsky, London, 1942.

al-Mas'ūdī, Abu 'l Ḥasan 'Alī b. al-Ḥusain b. 'Alī

(d. 345/956), Kitāb al-Tanbih wa'l-Isrāf,

ed. de Goeje, Leyden, 1894.

--- Murūj al-Dhahab, ed. Barbier de Meynard,  
Paris 1861,77 (9 vols.)

Akhbar al-Zamān, Cairo, 1939.

al-Māwardī, 'Alī b. Muḥammad (d. 450/1058), al-'Aḳām al-Sultāniyya, Cairo, 1298/1881).

Michael the Syrian (d. 1199 A.D.), Chronique de Michel Le Syrien Patriarche Jacobite d'Antioche, 4 vols ed. and trans. by J.B. Chabot, first published 1899-1910, Paris; reprinted Bruxelles, 1963.

Ibn Mirnāṭī, Qawānin al-dawawīn, Cairo, 1299.

Miskawāh, Aḥmad b. Muḥammad (d. 421/1030), Tajārib al-Umam, published in Arabic by Amidroz and Margoliouth, vols. I, II, with translation, "The Eclipse of the Abbāsīd Caliphate", vols. IV, V, Oxford, 1921.

Ibn Mujāwir, Yūsuf b. Ya'qūb (d. 690/1291), Ta'rīkh al-Mustabṣir, 2 parts, ed. O. Lofgren, Leyden 1951, 1954.

Ibn al-Mu'tazz, 'Abdallāh (d. 296/908), Kitāb al-Badī', ed. by Ignatius Khratchkovsky, London, 1935.

-----  
Tabaqāt al-Shu'ara', Cairo, 1955.

al-Maqdisi, Muṭahhir b. Ṭāhir (d. 355/966), Al-Bid' wa'l-tarīkh, 6 vols., Paris 1899-1919.

al-Maqdisi, Aḥmad b. Abd 'l-Razzāq, Kitāb al-Yawāqīt, Cairo, 1300 A.H.

al-Muqaddasī, Muḥammad b. Aḥmad ( 375/985), Aḥsan al-taqasīm fī ma'rifat al-aqālīn, ed. de Geoeje, Leyden, 1906.

Ibn al-Nadīm, Muḥammad b. Ishāq (d. 377/987), al-Fihrist, ed.

A. Flugel, 2 vols., Leipzig, 1871-2.

Nāṣir-ī Khusrāw, Abū Mu'īn (d. after 1087 A.D.),

Safarnāma; trans. by Schefer, Paris,

1891; Arabic trans. by Y. Khashshab,

Cairo, 1945.

al-Nisābūrī, al-Ḥasan b. Muḥammad (d. 406/1015),

'Uqalā' al-majānīn, ed. F. Kilānī, Cairo,

1924.

al-Nuwayrī, Aḥmad b. 'Abd 'l-Wahhāb (d. 732/1331-2),

Nihāyat al-arab fī funūn al-adab,

Cairo, 1923-1955.

al-Qalqashandī, Abū 'l - 'Abbās Aḥmad b. Abdallah (d. 821/1418),

Subḥ al-a'sha, 14 vols., Cairo, 1919-1920.

--- Ma'āthir al-Ināfa fī ma'ālim al-Khilāfa,

Kuwait, 1964.

--- Nihāyat al-arab fī ansāb al-'Arab, ed.

al-Ibyarī, Cairo, 1959.

al-Qazwīnī, Zakariyā' (d. 683/1283), Āthar al-Bilād wa akhbār

al-'Ibād, Beirut, 1960.

---

al-Qiftī, Jamāl al-Dīn 'Alī b. Yūsuf al-Shaībanī (d. 648/1248),

Ta'rīkh al-Hukamā', ed. b. J. Lippert,

Leipzig, 1903.

Qudāma, Abu 'l-Faraj Qudāma b. Ja 'far b. Qudāma al-Kātib al-Baghdādī (d. 320/932),  
Kitāb al-kharāj wa ṣan'at al-kitāba,  
 ed. de Goeje, Leyden, 1889.

al-Qumī, Ḥasan b. Muḥammad (d. 9th/15th C.), Tarikh-i Qum,  
 Tehran, 1935 (A Persian translation of  
 the Arabic original.)

Ibn 'Abd Rabbi, Abu 'Amr Aḥmad b. Muḥammad (d. 328/940),  
al-'Iqd al-farīd, ed. A. Amīn, Cairo,  
 1948-53.

Ibn Rajab, 'Abd 'l-Raḥman b. Ali al-Ḥanbali (d. 795/1392),  
al-Dhail 'alā ṭabaqāt al-Ḥanābila,  
 ed. Laoust and Dahhān, Damascus, 1951.

Rasa'il Ikhwān al-Ṣafā, 4 vols., ed. by Kh. al-Ziraklī,  
 Cairo, 1928.

Ibn al-Rūmī, Diwān, 3 vols., Cairo, 1903.

Ibn Rustah, Abu 'Alī Aḥmad b. 'Umar (d. about 310/922),  
al-A'lāq al-nafīsa, ed. de Goeje, Leyden,  
 1892.

al-Ṣabī, Hilāl b. al-Muḥassin (d. 448/1056-7),  
Tuḥfat al-Umarā' fī ta'rīkh al-wazarā',  
 ed. A.A. Farrāj, Dar iḥyā' al-Kutub  
 al-'Arabiyya, Cairo, 1958.

-----  
Rasā'il al-Ṣabī, vol. I, ed. Shakīb  
 Arslān, Beirut, 1898.

al-Ṣābi, Hilāl b. al-Muḥassin,

Rusūm dar al-Khilāfa, Baghdad, 1964.

Sa'īd b. al-Bitrīq (d. 4th C./10th C.), al-Ta'rīkh al-Majrū'  
'alā al-tahqīq, Beirut, 1905.

Ibn al-Sā'ī, al-Jāmi' al-rukhtaṣar, Baghdad, 1934.

Ṣa'rafī, Ibn Munjib al-Maṣrī, Kitāb al-Ishāra ilā man nāl al-  
Wizāra, Paris, 1924.

al-Sakhāwī, Muḥammad b. 'Abd 'l-Raḥman (d. 902/1497),

al-I'lān bi'l-Tawbīkh li-man dhamma ahl  
al-tarīkh, Cairo, 1934-36; Baghdad,  
1963.

Salama al-Ra'ī, Hilāl b. Yahyā b. Salama (245/853),

Kitāb Ahkām al-Waqf, Hyderabad, 1355 A.H.

Sam'ānī, 'Abd 'l-Karīm b. Muḥammad (d. 562/1167),

Kitāb al-Ansāb, London, 1912.

al-Saqatī, Abu 'Abdallāh Muḥammad, Kitāb fi ādāb al-hisba,

ed. Colin and L. Provencal, Paris, 1931.

al-Sarraj, Maṣārī' al-'Ushshāq, Istanbul, 1301 A.H.

al-Shābushtī, Abu'l-Ḥasan (d. 388/998), Dayyarat, ed. G. 'Awwād,  
Baghdad 1951.

al-Shahrastānī, Muḥammad b. 'Abd al-Karīm (d. 548/1153),

Kitāb al-Milal wa'l-nihal, 2 vols.,  
Leipzig, 1923.

al-Shaibānī, K tab al-Makhārij wa'l-hiyal, ed. J. Schacht,

Haover, 1923.

Abū Shajā' al-Radhrawī (d. 487/1094-), Dhail Tajārib al-Umam,

ed. Amedroz and Margoliouth, Oxford, 1921.

Ṣibt ibn al-Jawzī, Abu'l-Muzaḥaffar (d. 654/1256),

Mir'at al-Zamān, 2 vols.

Hyderabad, 1952-2; vol. VIII, wd.

by J.R.Jewett, Chicago, 1907.

Suhrāb (Ibn Serapion), 'Ajā'ib al-Aqālīm al-Sab'a,

ed. Hans v. Mzik, Leipzig, 1929.

Ṣūlī, Abu Bakr Muḥammad b. Yahya (d. 335/916),

Kitāb al-Awrāq, ed. J. Heyworth Dunne,

London, 1934.

--- Adab al-Kuttāb, 3 vols., ed. M.B.

al-'Atharī, al-Matba'a al-Salafiyya,

Cairo, 1341 A.H.

--- Akhbār al-Shu'arā' al-muḥadathīn,

London, 1934.

--- Akhbār al-Raḍī wa'l-Muttaqī,

ed. H.J.Dunn, Cairo, 1935.

--- Akhbār al-Buḥturī, ed. S. al-Ashtar,

Damascus, 1958.

al-Suyūṭī, 'Abd 'l-Raḥman (d. 911/1505), Ta'rīkh al-Khulafā',

ed. M.M.'Abd 'l-Hamīd, Cairo, 1964.

al-Suyutī, 'Abd 'l-Rahmān,

al-Mustadraf min akhbār al-Jawārī,

Damascus, 1963.

Ibn Tabāṭaba, Muḥammad b. 'Alī (d. 709/1309), al-Fakhri fi'l-

ādab al-Sultāniyya wa'l-duwal al-Islamiyya,

Cairo, 1927.

Tabarī, Abu Ja'far Muḥammad b. Jarīr (d. 310/922),

Ta'riḫ al-Rusul wa'l-mulūk,

ed. de Goeje and others, Leyden, 1879-1901.

---

Iḥtilāf al-Fuqahā', J. Schacht, Leyden,

1935.

Taifūr, Aḥmad b. Abi Ṭāhir (d. 280/393), Kitāb Baghdād,

Leipzig, 1904.

Ibn Taghrī Bardī, Abu 'l-Maḥāsīn Yūsuf (d. 874/893),

al-Nujūm al-Zāhira, 12 vols., Leyden,

1851; Cairo, 1929-39.

Tanūkhī, al-Muḥassin b. 'Alī al-Qaḍī, Nishwār al-muḥādara,

or Jāmi' al-tawarīḫ, vol. I, ed.

by al-Majma' al-'Ilmī al-'Arabī,

Damascus, 1930; vols. I and VIII,

trans. by Margoliouth, IC, 1931-2.

---

al-Mustajād min fi'lāt al-ajwād,

ed. Muḥammad Kurd 'Alī, Damascus, 1942.



Tanūkhī, al-Muḥassin b. 'Alī al-Qaḍī,

al-Faraj ba'd al-Shidda, Cairo, 1904.

Tawhīdī, Abū Hayyān (d. 387/997), al-Imtā' wa'l-mu'anasa,

3 vols., Cairo 1942.

---

Aḥlāq al-Wazīrāin, Damascus, 1965.

al-Tha'ālibī, Abū Maṅṣūr 'Abd 'l-Malik b. Muḥammad

(d. 429/1037-8), Laṭā'if al-Ma'ārif,

ed. Ibyārī and Sayrafī, Cairo, 1960;

the English trans. with an introduction

by C.E. Bosworth, "The Book of Curious

and Entertaining information", Edinburgh, 1968.

---

Thinār al-Qulūb, Cairo, 1908.

---

Khawṣ al-Khawṣ, Tunisia, 1293 A.H.

---

Yatīmat al-dahr, 4 vols., ed. M.M.

'Abd 'l-Ḥamīd, Cairo, 1947.

---

Fiqh al-Luḡha, Beirut, 1885.

---

Rasā'il, Istanbul, 1301 A.H.

Abī 'Ubaīd, al-Qāsim b. Sallān, Kitāb al-Anwāl, Cairo, 1353/1934.

Ibn Abī Uṣaibi'a, Aḥmad b. al-Qāsim (d. 668/1269),

'Uyūn al-anba' fī ṭabaqāt al-aṭibbā', 2 vols.,

Cairo, 1882.

al-'Umari, Aḥmad b. Yaḥyā (d. 749/1348), Maṣālik al-absār fī

ma'nālik al-anṣār, ed. A. Zaki Pasha, Cairo,

1924.

Ibn al-Wardī, 'Umar b. al-Muzaffar (d. 749/1348),

Kharīdat al-'ajā'ib wa farīdat al-  
gharā'ib, Cairo, 1939.

Yahya b. 'Ādam, b. Sulaymān al-Qurashī (d.203/818),

Kitāb al-Kharāj, ed. Ben Shemesh,  
Leyden, 1958.

Abu Ya'la, al-Aḥkam al-Sultaniyya, Cairo, 1938.

al. Ya'qūbī, Ahmad b. Abī Ya'qūb b. Waḍiḥ (d.284/897),

Kitāb al-Bulḍān, ed. de Goeje, Leyden, 1892.

---

Ta'rikh, ed. Houtsma, Leyden, 1883.

Yāqūt, Shihāb al-Dīn al-Rūmī al-Ḥamawī (d.626/1228),

Mu'jam al-Bulḍān, 6 vols., ed. F. Wustenfeld,  
Leipzig, 1866-70.

---

Irshād al-Arīb ilā ma'rifat al-Adīb,

7 vols., ed. Margoliouth, London, 1907-31.

Abū Yūsuf, Ya'qūb b. Ibrāhīm (d.182/798), Kitāb al-Kharāj,

Cairo, 1933/1352.

al-Zabīdī, Muḥibb al-Dīn al-Sayīd Muḥammad b. Murtaḍa,

(d. 1205 A.H.), Tāj al-'Arūs min Jawahir  
al-Qāmūs, Dar Ṣādir, Beirut, 1386/1955.

al-Zubairī, Abu 'Abdallāh Muṣ'ib b. Abdallah (d. 236/851),

Nasab Quraish, Cairo, 1953.

Modern worksa) Books

Abbot, N., Two Queens of Baghdad, New York, 1946.

Adams, R. McC., Land behind Baghdad, Chicago and London, 1965.

Adelson, H. L., Medieval Commerce, New York, 1961.

Adler, E. N., Jewish Travellers, London, 1930.

Afghānī, S. al-, Aswāq al-'Arab fī'l-Jahiliyya wa'l-Islām,

Damascus, 1960.

Aḥmad, M. H., al-Khilāfa wa'l-Dawla fī'l-'aṣr al-'Abbāsī,

Cairo, 1959.

Airy, W., On the Arabic glass weight, London, 1920.

'Alī, S. A. el-, al-tanzīmat al-ijtimā'īyya wa'l-iqtisādiyya

fī'l-Baṣra fī'l-qarn al-awwal al-hijrī,

Baghdad, 1953.

--- 'Ilm al-tā'rīkh 'ind 'l-muslimīn

Baghdad, 1953.

Ali, M. K., Khīṭaṭ al-Shām, Damascus, 1925-6.

--- Umarā' al-bāṭin, Cairo, 1937.

--- Rasā'il al-Bulaghā', Cairo, 1957.

'Alawchī, A. H., Mu'allafāt ibn al-Jawzī, Baghdad, 1965.

Ālūsī, M. Sh. al-, Bulūgh al-arab fī ma'rifat aḥwāl al-'Arab,

3 vols., Baghdad, 1313.

Amedroz, H. F., The historical remains of Hilāl al-Sābī,

Leyden, 1904.

- Arberry, A.J., The Chester Beatty Library, a Handbook of the Arabic manuscripts, Dublin, 1955.
- Arnold, Sir Thomas W., The Caliphate, Oxford, 1965.
- Ashtor, Strauss E., Histoire des Prix et des Salaires dans l'Orient Médiéval, Paris, 1969.
- 'Awwād, M., al-Ma'āṣir fī bilād al-rūn wa'l-Islam, Baghdad, 1948.
- Azzām, A., Dhikrā Abi'l-Tāyib, Baghdad, 1936.
- Azzāwī, A., Ta'rīkh al-daw'ib al-'Irāqiyya, Baghdad, 1959.
- 'Ashā'ir al-'Irāq, 2 vols., 1937-47.
- al-Ta'rīf bi'l-mu'arrikhīn, Baghdad, 1957.
- Baron, S.W., A social and religious history of the Jews, 10 vols., New York, 1957.
- Barthold, W., Turkestan down to the Mongol invasion, Gibb Memorial Series (N.S.V.), London 1958.
- Mussulman Culture, trans. from Russian by Sahrawardī, Calcutta, 1934.
- Berchem, M. van, La Propriété Territoriale, Genève, 1886.
- Bonebakker, S.A., The Kitāb Naqd al-Shi'r of Qudama b. Ja'far, Leiden, 1956.
- Bosworth, C.E., The Islamic Dynasties, Edinburgh, 1967.
- The Book of Curious and Entertaining Information, Edinburgh, 1968.

Boulnois, L., The Silk Road, London, 1963.

Bowen, H., The life and times of 'Alī b. 'Isā, Cambridge, 1928.

Brockelmann, C., Geschichte der Arabischen Literatur,

2 vols., Leyden, 2nd edition, 1943-49;

Supplement, 3 vols., 1937-42.

---

History of the Islamic Peoples,

New York, 1947.

Bustānī, B., Muḥit al-Muḥit, Beirut, 1860.

---

Muntaqaiyat udabā' al-'Arab fī al-

'Uṣūr al-'Abbāsiyya, Beirut, 1948.

De Goeje, M.J., Memoire sur les migrations des Tsiganes à  
travers l'Asie, Leyden, 1903.

Cahen, Cl., Pre-Islamic Turkey, trans. by J. Jones-Williams,  
London, 1958.

Calverley, E.E., Islam, Cairo, 1958.

The Cambridge History of Iran, vol. V., Cambridge, 1968.

Canard, M., Histoire de la Dynastie des Hamdanīds de Jazīra  
et de Syrie, Algiers, 1951.

Coulson, N.J., A History of Islamic Law, Edinburgh, 1964.

Creswell, K.A.C., A short Account of early Muslim Architecture.  
London, 1958.

Dawood, A.H., A Comparative Study of Arabic and Persian Mirrors  
for Princes from the Second to the Sixth  
Century A.H., Ph.D. Thesis, S.O.A.S.,  
University of London, 1965.

Day, C., A History of Commerce, New York, 1922.

Dennett, D.C., Conversion and the Poll-Tax in Early Islam.

Cambridge, 1950.

De Slane, M., Catalogue des Manuscrits Arabes. Bibliothèque Nationale, Paris, 1883-95.

-----  
Memoire sur les Carmathes du Bahrain et les Fatimides. Leyden, 1886.

Dunlop, D.M., The History of the Jewish Khazars, Princeton, 1954.

Dūrī, A.A., al-‘Asr al-‘Abbāsi al-awwal, Baghdad, 1945.

-----  
Studies on the economic life of Mesopotamia in the 10th century, Ph.D. Thesis, S.O.A.S. University of London, 1942.

-----  
Ta’rīkh al-‘Irāq al-Iqtisādī fi’l-qarn al-rābi‘ al-hijrī, Baghdad, 1948.

-----  
al-Nuzum al-Islāmiyya, Baghdad, 1950.

-----  
Dirāsāt fi’l-‘Uṣur al-‘Abbāsiyya al-Muta’akkhira, Baghdad, 1954.

-----  
Baḥṭh fi nash’at ‘Ilm al-ta’rīkh ‘ind al-‘Arab, Beirut, 1960.

-----  
Muqaddama fi’l-tārīkh al-‘iqtisādī al-‘Arabī. Beirut, 1969.

Dozy, R.P.A., Dictionnaires des Noms des vêtements Arabes,

Amsterdam, 1845.

-----  
Supplément aux Dictionnaires Arabes,  
Leyden, 1927.

East, W.G., The Geography behind History, London, 1938.

Ehrenkreutz, A.S., Contributions to the history of the Islamic  
mint in the middle ages, Ph.D. thesis,  
London, 1952.

Encyclopaedia of Islam, 1st edition, Leyden, 1913.

Encyclopaedia of Islam, 2nd edition, Luzac & Co., 1960  
(in progress).

Fagnan, E., Additions aux dictionnaires arabes, 1923.

Fahmy, A.M., Muslim Sea Power in the Eastern Mediterranean  
(7th to the 10th Century A.D.), London  
1950.

--- al-Nuqud al-'Arabiyya, Cairo, 1964.

Farrūkh, U., 'Abdallah b. Muqaffa', Beirut, 1941.

--- Bashshār b. Burd, Beirut, 1946.

Fattal, M., Le Statut Légal des non-musulmans en Pays l'Islam,  
Beirut, 1958.

Field, H., The Anthropology of Iraq, 2 parts, New York, 1940.

--- The Arabs of Central Iraq, New York, 1937.

Fischel, W.J., Jews in the economic and political life of  
Medieval Islam, London, 1937.

--- The region of the Persian Gulf and its  
Irish Settlement in Islamic times,  
New York, 1950.

Frey, A.R., Dictionary of numismatic names, New York, 1937.

Frey, R.N., The Heritage of Persia, London, 1962.

Ganshof, F.L., Feudalism, London, 1964.

Gaudefroy-Demombyns, M., Muslim Institutions, English trans.

by J.P.McGregor, 2nd ed., 1954.

Ghanīma, Y.R., Nuzhat al-Mushtāq fī tārikh Yahūd al-Iraq,

Baghdad, 1924.

Gibb, H.A.R., Studies on the Civilization of Islam, London, 1962.

--- The Arab Conquest in Central Asia,

London, 1923.

Gibbon, E., The history of the decline and fall of the Roman

Empire, ed. by Bury, London, 1929, vol. VII.

Goitein, S.D., Studies in Islamic history and institution,

Leyden, 1966.

--- Jews and Arabs. their contacts through  
the ages. New York, 1964.

--- A Mediterranean Society, I, Economic  
Foundation, California, 1967.

Goldziher, I., Muhammedanische Studien, 2 vols., Halle 1889-90;

2nd edition, Hildesheim, 1961.

Graetz, V., Geschichte des Juden, vol. II, Leipzig, 1888.

Grohmann, A., Arabic Papyri in the Egyptian Library, 6 vols.,

Cairo, 1934-62.

--- From the World of Arabic Papyri, Cairo, 1952.

--- Einführung und Chrestomathie zur  
Arabischen Papyruskunde, Prague, 1955.



Grunebaum, von G., Medieval Islam, Chicago, 1946; 2nd ed.,

Chicago, 1953.

Guillaume, A., The traditions of Islam, Oxford, 1924.

Islam, Edinburgh, 1954.

Hamada, S., al-Nizam al-Iqtisādi fi'l-'Irāq, Beirut, 1938.

Hasan al-Bāshā, al-Alqāb al-Islāmiyya fī al-ta'rīkh wa'l-

Wathā'iq wa'l-Athār, Cairo, 1957.

Hasan, H., A History of Persian Navigation, London, 1928.

Hasan, S., Early history of the Buwayhids, Allahabad, 1948.

Hasan, Z.M., al-Rahhala al-Muslimūn fī'l-'Usūr al-Wustā,

Cairo, 1945.

Hashimī, T., Mufaṣṣal Jughrāfiyat al-'Irāq, Baghdad, 1930.

Heyd, W., Histoire du Commerce du Levant, Leipzig, 1923.

Hinz, W., Islamische Masse und Gewichte, Leyden, 1955.

Hitti, Ph.K., History of the Arabs, 5th ed., London, 1953.

Husainī, S.A., Arab administration, Madras, 1949.

'Isā, A., Mu'jam asma' al-nabat, Cairo, 1930.

Jawarī, A.A., ash-Shi'r fī Baghdād, Baghdad, 1956.

The Jewish Encyclopaedia.

Juynboll, Th., Handbuch des islamischen Gesetzes,

1910.

Kabir, M., The Buwayhid Dynasty of Baghdad, Calcutta, 1964.

Kaḥḥāla, 'U.R., Mu'jam Qaba'il al-'Arab, Damascus, 1949.

Karmalī, A.M. al-, al-Nuqūd al-'Arabiyya wa 'ilm al-numīyāt,

Cairo, 1939.

Kāshif, S.I., Misr fī fair al-Islām Cairo, 1947.

Kindermann, H., Schiff in Arabischen, Zwickau, 1934.

Krachkovsky, I.Y., Tā'rikh al-Adab al-Jughrāfi al-'Arabī

(The Arabic translation from the Russian  
by 'Uthmān, S., Cairo, 1963).

Kramer, A. von, The Orient under the Caliphs, trans. into

English by Khuda Bukhsh, Calcutta, 1920.

--- Über das Einnahmenbudget des 'Abbasiden-  
Reiches vom Jahre 306, Wien, 1887.

Lambton, Ann K.S., Contribution to the Study of Seljuq

Institution, thesis, London, 1939.

--- Landlord and Peasant in Persia, London, 1953.

Lane-Poole, S., Catalogue of Oriental coins in the British

Museum, vols. II-III, 1876-7.

--- The Mohammadan dynasties, Paris, 1925.

Lapidus, I.M., Muslim cities in the Middle Ages, Cambridge, 1967.

Laxoix, H., Cataloge des monnaies musulmanes de la Bibliothèque

Nationale, Paris, 1896.

Leggett, E., Notes on the Mint-Towns and Coins of the Mohammadans

London, 1835.

Le Strange, The Land of the Eastern Caliphate, Cambridge, 1930.

--- Palestine.

--- Baghdad during the 'Abbasid Caliphate.

Oxford, 1924.

Le Strange, Description of Mesopotamia and Baghdad (Ibn Serapion),  
1895.

Levy, R., A Baghdad Chronicle, Cambridge, 1929.

--- The Social Structure of Islam, Cambridge, 1965  
1965.

Lewis, B., The Origins of Ismā'ilism, Cambridge, 1940.

--- The Arabs in History, London, 1966.

Lewis, B., and Holt, P.M., Historians of the Middle East,  
London, 1962.

Løkkegaard, F., Islamic Taxation in the Classic Period,  
Copenhagen, 1950.

Lopez, R.S., and Raymond, I.W., Medieval trade in the Medi-  
terranean World, London, 1955.

Maqdisī, A. 'Umarā' al-Shi'r al-'Arabī fi'l 'Asr al-'Abbāsī,  
Beirut, 1961.

Marçais, G., La Berbère musulmane, Paris, 1946.

Margoliouth, D.C., Lecture on Arabic Historians, Calcutta, 1930.

Margolis, M.L., and Marax, A., A History of the Jewish People,  
Philadelphia, 1945.

Ma'rūf, N., 'Urūbat al-mudun al-Islāmiyya, Baghdad, 1964.

Massignon, L., La Passon d'al Hallaj, Paris, 1922.

--- Khiṭaṭ al-Kufa, trans. into Arabic  
by Muṣ'abi, T., Saidon, 1937.

Miz, A., Die Renaissance des Islam, Heidelberg, 1922.

English trans. by Khuda Bukhsh,  
'Renaissance in Islam', Patna, 1937.

Miles, G.C., The Numismatic History of Rayy, New York, 1938.

Miles, S.B., The Countries and Tribes of the Persian Gulf,

London, 1919.

Minorsky, V.F., La Domination des Dailamites, Paris, 1932.

Muir, W., The Caliphate, its Rise, Decline and Fall,

Edinburgh, 1924.

Mūsa, M.Y., Abī Hanīfa, Cairo, 1957.

---- Ta'rikh al-Fiqh al-Islamī, Cairo, 1964.

Mosil, A., The Middle Euphrates, New York, 1927.

Mustafā, Sh., Fi al-Ta'rikh al-'Abbāsī, Damascus, 1957.

Naqshbandī, N., al-Dīnār al-Islamī fī'l-mathaf al-'Iraqī,

vol. I, Baghdad, 1953.

Naval Intelligence Division, Iraq and Persian Gulf, 1943.

Newton, A.P., Travel and Travellers of the Middle Ages,

London, 1926.

Newman, J., The Agricultural Life of the Jews in Babylonia,

Leyden, 1965-7.

Neusner, J., A History of the Jews in Babylonia, Leyden, 1965-7.

Nicholson, R.A., A Literary History of the Arabs, Cambridge, 1935.

Nöldeke, Th., Sketches from Eastern History (English trans.

by Black, J.S.), London, 1892.

Obermeyer, J., Die Landschaft Babylonian, Frankfurt, 1929.

Omar, F., The 'Abbāsīd Caliphate 132/750-170/786.

Ostrogorsky, G., History of the Byzantine State (English trans.

by J. Hussey), Oxford, 1956.

Ongley, F., Ottoman Land Code, London, 1892.

Pellat, Ch., Le Milieu Basrien et la formation de Gahiz,

Paris, 1953. Trans. into Arabic by

Kilāni, I., Damascus, 1961.

Piganiol, A., Histoire Romaine, l'Empire Chrétien,

Paris, 1947.

Pirenne, H., Economic and Social History of the Medieval Europe,

London, 1936.

Rabī', M.H., The Financial System of Egypt 564-741/1169-134,

Ph.D. thesis, London, 1968.

Rayies, M.D. al-, al-Kharāj fi'l dawla 'l Islāmiyya, Cairo, 1957.

Ramzi, M., al-Qamūs al-Jughrāfī, 5 vols., 2 parts, Cairo,

1953-63.

Rifā'i, A.F. al-, 'Asr al-Ma'mūn, Cairo, 1928.

Rosenthal, F., A History of Muslim Historiography, Leyden, 1952;

Revised ed., Leyden, 1968; Arabic

trans. by S.A. al-'Alī.

m ---

Technique and Approach of the Muslim

Scholarship, Rome, 1947.

---

The Muqaddima.

Rostovtzeff, M., The social and economic history of the

Hellenistic world, 3 vols., Oxford, 1941.

Rotter, G., Die Stellung des Negers in der Islamische Arabischen

gesellschaft bis zum XVI Jahrhundert,

Bonn, 1967.

Rustam, A., Abū Ja'far al-Mansūr, Cairo, 1965.

Sadighi, G.H., Les mouvements religieux Iraniens du II<sup>e</sup> et  
on III<sup>e</sup> Siècles de l'hégire, Paris, 1938.

Samir, F., Thawrat al-Zanj, Baghdad, 1945.

Sauvaget, J., Introduction à l'Histoire de l'Orient Musulman,  
2nd ed., Cl. Cahen, Paris, 1961.

Sayyid, F. al-, Fihras al-Makhtutāt al-Musawra, 3 vols.,  
Cairo, 1954-9.

Schacht, J., An Introduction to Islamic Law, Oxford, 1964.

--- The Origins of Muhammadan Jurisprudence,  
Oxford, 1950.

Sharif, M.B., al-Širā' bain al-'Arab wa'l-Mawālī, Cairo, 1945.

Shemesh, A. Ben, Taxation in Islam, 3 vols., Leyden, 1958-1970.

(See: Yahya b. Adam, Qudāma and Abū Yūsuf).

Sourdel, D., Le vizirat 'Abbāside de 749 à 936, 132 `324 de  
l'hégire, 2 vols., Damascus, 1959-60.

Strekc, M. Die Alte Landschaft Babylonien, nach den Arabischen  
Geographie (N), 2 vols., Leyden,  
1900-1901.

Stephenson, C., Medieval Feudalism, New York, 1969.

Suṣa, A.N., Al-Rayy wa'l-Haḡāra fi wādi 'l rāfidāin, Part I.  
Baghdad, 1968.

Thabit, N., al-Jundiyya fi'l-dawla al-'Abbāsiyya, Baghdad, 1956.

Thompson, J.W., Economic and Social History of the Middle Ages,  
New York and London, 1928.

--- The Middle Ages 300-1300, 2 vols.,  
New York, 1931.

--- The Medieval library, New York, 1957.

Tritton, A.S., The Caliphs and their non-Muslim Subjects,  
Oxford, 1930.

Tyan, E., Institutions du Droit Public Musulman, Beirut, 1954.

Van Volten, G., De Opkomst der Abbasiden in Chorasán, Leyden, 1890.

Vasiliev, A.A., Byzance et les Arabes, Bruxelles, 1935.

--- History of the Byzantine Empire, 2  
vols., Madison, 1958.

Vasmer, R. Chronologie der arabischen Statthalter von  
Armenien unter den Abbasiden, Leningrad,  
1931.

Watt, M., Islamic Survey, Edinburgh, 1962.

Weil, G., Geschichte der Chalifen, Mannheim, 1866.

Zakī, A.K., al-Hayāt al-adabīyya fi'l-Basra ilā nihāyat al-qarn  
al-thānī al-hijrī, Damascus, 1961.

Zambaux, E., Manuel de généalogie et de Chronologie Pour  
l'Histoire de l'Islam, Hanovre, 1927.

Zaidān, J., Tā'rikh al-tamaddun al-Islāmī, Cairo, 1926-35.

b) Articles in Periodicals

Abbott, Nabia, 'The Contribution of Ibn Muqla to the North-Arabic Script', AJSL, 56 (1939), pp. 70-88.

--- 'Two Buyid Coins in the Oriental Institute', AJSL, 56 (1939), pp. 350-364.

--- 'Arabic Papyri of the reign of Ga'far al-Mutawakkil 'ala-llah (A.H.232-47/A.D. 847-61)', ZDMG, 92 (1938), pp. 88-135.

--- 'An Arabic Papyrus dated A.H.205', JAOS, 57 (1937), pp. 312-5.

--- 'A ninth-century fragment of the "Thousand Nights"', JNES, 8 (1949), pp. 129-164.

--- 'A new Papyrus and a review of the administration of 'Ubaid allāh b. Ḥabīb', apud Makdisi, Arabic and Islamic Studies, pp. 21-35.

Ali, S. A. el-, 'Al-Biruni; the scholar and the writer', Proc. Pakistan Hist. Conf. (3rd session, 1953), pp. 243-52.

Ali 'Abd al-Qadir, 'Land Property and Land Tenure in Islam', Islamic Quarterly, V (1958).

'Ali, J., 'Mawarid Ta'rikh al-Mas'ūdī', Sumer, 20 (1964), pp. 1-48.

Amedroz, H.F., 'The Mazālim Jurisdiction in the Ahkam Sultaniyya of Mawardī', JRAS, 1911, pp. 635-674.



Amédroz, H.F., 'The office of Kadi in the Ahkam Sultaniyya of Mawardi', JRAS (1910), pp. 761-796.

----  
'The Tajarib al-Umam of Abu 'Ali Miskawaih',  
Islam, 5 (1914), pp. 335-357.

----  
'An unidentified MS. by Ibn al-Jauzi',  
JRAS (1906), pp. 851-880; (1907), pp. 19-39.

----  
'Abbasid administration in its decay, from the Tajarib al-Umam', JRAS (1913), pp. 823-842.

----  
Tales of official life from the  
"Tadhkira" of Ibn Hamdun, etc.',  
JRAS (1908), pp. 408-470.

----  
'Three Years of Buwaihid rule in Baghdad A.H. 389-393', JRAS (1901), pp. 501-36.

Arnold, T.W., 'Muslim civilization during the 'Abbasid Period',  
Cambridge Medieval History, IV (1923),  
pp. 274-99.

Anderson, J.N.D., 'Recent Reforms in the Islamic Law of Inheritance', Int.Com. Law Q. (4th Ser.)  
14 (1965), pp. 349-65.

Ashley, W.J., 'The Beginnings of Town Life in the Middle Ages',  
JQR (1959), pp. 55-68, 147-66.

Ashtor (Strauss), E., 'Quelques indications sur les revenus dans l'Orient musulman au haut moyen âge',  
J.Econ.Soc.Hist.Orient. 2 (1959),  
pp. 262-280.

Ashtor (Strauss), E. 'Le Coût de la vie dans l'Egypte

médiévale', J. Econ.Soc.Hist.Orient,  
3 (1960), pp. 56-77.

----  
The Kārīmi Merchants', JRAS (1956),  
pp. 45-56.

----  
'L'administration urbaine en Syrie  
médiévale', RSO, 31 (1958-9), pp. 73-128.

----  
'Essai sur les Prix et les Salaires dans  
l'Empire Calyfen', RSO 36 (1961),  
pp. 19-69.

----  
L'évolution des prix dans le Proche-  
Orient à la basseOépoque', JESHO  
4 (1961), pp. 15-46.

----  
'La Recherche des Prix dans l'Orient  
médiéval sources, méthodes et problèmes',  
SI, 21 (1964), pp. 101-144.

----  
'The Social Isolation of Ahl adh-dhimma',  
Études Orientales à la Mémoire de Paul  
P. Hirschler', Budapest (1950), pp. 73-94.

----  
'J. Schacht, An Introduction to Islamic  
Law', Bibliotheca Orientalis 23 (1966),  
p.104.

'Awwād, G., 'Arabic Publication on the historical geography of  
Iraq', Sumer 9 (1953), pp. 63-97.

----  
'Uṣūl asmā' al-amākin al-'Irāqiyya',  
Sumer, 8 (1952), pp. 237-280.

'Awwād, M., 'Aqṣam ḡā'i'a min Kitāb al-Wuzarā' wa'l-Kuttāb',  
Majallat al-Majma' al-'Ilmī al-'Arabi,  
 18 (1943), pp. 318-20, 435-38.

Ayalon, D., 'The Military Reforms of the Caliph al-Mu'tasim:  
 Their background and consequences',  
 unpublished paper.

Balog, P., 'Aperçus sur la technique du Monnayage musulman  
 au Moyen âge', BIE, 31 (1948-9), pp. 95-105.

Bartold, W., 'Caliph and Sultan', IQ (1963), pp. 117-135.

Bekhit, M., 'De l'institution du waqf', L'Egypt Contemporaine  
 18 (1927), pp. 403-421.

Blake, R.P., 'The Circulation of Silver in the Muslim east down  
 to the Mongol epoch', HJAS, 2 (1937),  
 pp. 291-328.

Bosworth, C.E., 'Some new manuscripts of al-Khawarizmi's  
 Maḥatib al-'Ulūm', J. Semitic Studies,  
 (1964), pp. 341-345.

--- 'The rise of the Karāmiyya in Khurasān',  
Muslim World, 50 (1960), pp. 5-14.

--- 'Military Organization under the Buyids  
 of Persia and Iraq', Oriens (1965-66),  
 143-67.

--- 'Abū 'Abdallāh al-Khawarizmi on the  
 technical terms of the Secretary's Art',  
 A contribution to the administrative  
 history of mediaval Islam, JESHO, 12,  
 Part 2 (1969).

- Brooks, E.W., 'The Byzantines and Arabs in the time of the early Abbasid', Economic History Review 15 (1900).
- Cahen, Cl., 'Reflexions sur le Waqf ancien', SI, 14 (1961), pp. 37-56.
- 'L'évolution de l'iqṭā' du IX<sup>e</sup> au XIII<sup>e</sup> Siècle', Annales E.S.C., 8 (1953), pp. 25-52.
- 'Notes pour l'Histoire de la Himāya', Mélanges Louis Massignon, 1 (1956), pp. 287-303.
- 'L'Histoire économique et social de l'Orient Musulmane médiéval', SI, 3 (1955), pp. 93-115.
- 'Mouvements Populaire et autonomisme urbain dans l'Asie Musulmane du moyen age II', Arabica, V (1958), pp. 225-50; VI (1959), pp. 25-56.
- 'Fiscalité, Propriété, Antagonismes Sociaux en Haute-Mésopotamie au temps des Premiers 'Abbāsides d'après Denys de Tell-Mahré', Arabica, 1 (1954), pp. 136-152.
- x --- 'Contribution à l'étude des impôts dans L'égypte Médiévale', JESHO, 8 (1965), pp. 244-277.
- 'Le service de l'irrigation en Iraq au début de XI<sup>e</sup> siècle', BEQ (1949-51), pp. 117-134.

Cahen, Cl., 'Documents relatifs à quelques techniques Iraquiennes  
au début du onzième siècle', AI (1951),  
pp. 23-28.

---  
"Réflexion sur l'Usage du mot de  
"Féodalité", JESHO, 3 (1960), pp.2-20.

---  
'Review of Løkkegaard's Islamic Taxation',  
Arabica, I (1954), pp. 346-53.

---  
'Baghdad au temps des ses derniers  
Califes', Arabica, 9 (1962), pp.289-302.

---  
'Les Chroniques Arabes concernant la  
Syria, l'Egypte et la Mésopotamie de la  
conquête arabe à la conquête Ottomane dans  
les bibliothèques d'Istanbul', REI,  
10 (1936), pp. 333-362.

---  
'Mouvements et organisations populaires dans  
les villes de l'Asie musulmane au moyen age:  
milices et association de Foutouwwa',  
Recueils Soc.Jean Bodin, 7 (1955),  
pp.273-288.

---  
'Une correspondance buyide inédite',  
Stud. Orientalist. Levi della Vida, I (1956),  
pp.83-97.

---  
'L'Islam et les minorités confessionnelles  
au cours de l'histoire', Table ronde,  
126 (1958), pp. 61-72.

- Canard, M., 'Le Riz dans le Proche Orient aux Premiers Siècles  
de l'islam', Arabica, 6 (1959), pp.113-131.
- Dunlop, D.M., 'Sources of gold and silver in Islam according to  
al-Hamdānī (10th century A.D.);  
SI, 8 (1957), pp. 29-49.
- Ḍurī, A.A., 'The Iraq School of History to the ninth Century',  
Historians of the Middle East,  
ed. B.Lewis and P.M.Holt, London (1962),  
pp. 46-53.
- 'Niẓām al-ḍarā'ib fī Khurasān fī  
Ṣadr al-Islam', Bulletin of the  
College of Arts, University of Baghdad  
(1946), pp. 46-70.
- Duplessy, J., 'La Circulation des monnaies arabes en Europe  
occidentale du VIII<sup>e</sup> au XIII<sup>e</sup> siècle',  
Revue Numismatique, 18 (1956), pp.101-63.
- Ehrenkreutz, A.S., 'The Taṣrīf and Taṣ'īr, Calculations in  
Mediaeval Mesopotamian Fiscal Operations',  
JESHO, 7 (1964), pp. 46-56.
- 'Arabic dīnārs struck by the Crusaders',  
JESHO, 7 (1964), pp. 167-182.
- 'Byzantine Tetartera and Islamic dīnārs',  
JESHO, 7 (1964), pp.183-190.

Ehrenkretuz, A.S., 'Studies on the Monetary history of the Near

East in the Middle Ages', JESHO, 2  
(1959), pp. 128-162.

--- 'The Kurr System in Medieval Iraq',  
JESHO, 5 (1962), pp. 309-314.

--- 'Al-Būzjānī (A.D. 939-997) on the  
"Ma'sir"', JESHO, 8 (1965), pp. 90-92.

--- 'The Standard of fineness of Western  
and Eastern dīnārs before the Crusades',  
JESHO, 6 (1963), pp. 243-277.

--- 'Monetary aspects of medieval near-Eastern  
economic History', A paper submitted to  
the Conference on Economic History of Middle  
East at S.O.A.S. (July 1967).

Fischel, W.J., 'The Origin of Banking in Medieval Islam. A  
contribution to the economic history of the  
Jews of Baghdad in the tenth century A.D.',

JRAS, 35 (1933), pp. 339-352; 369-603.

--- 'Jews in the Economic and Political life  
of Medieval Islam', RAS, Monographs, 12  
(1937), pp. 416-422.

--- 'Bait Māl al-Khāṣṣa', A contribution to  
the history of 'Abbasid administration  
19th Cong. Int. degli Or. (1935), pp. 538-541.

Forand, Paul G., 'Notes on 'Usht and Maks', Arabica, 13 (1966),  
pp. 137-141.

Gabrieli, F., 'Il valore litteratario storico del Farag ba'da  
s-sidda di Tanūhī', RSO, 19 (1940),  
pp. 16-44.

Ghanīma, Y., 'The 'Abbāsid Coins', Sumer, 9 (1953), pp.98-131.

Gibb, H.A.R., 'The fiscal rescript of 'Umar II', Arabica, 2  
(1955), pp.1-16.

--- 'Government and Islam under the early  
'Abbasid', Elaborations de l'Islam  
8 (1961-2), pp.115-127.

Goitein, S.D., 'A turning point in the history of the Muslim  
State', IC, 29 (1949), pp.120-135.

--- 'The rise of the Near Eastern Bourgeoise  
in Early Islamic time', Cahiers d'Histoire  
Mondiale (1957), pp.583-604.

--- 'The Place of Balādhurī's "Ansāb al-  
'Ashrāf" in Arabic Historiography',  
International Congress of Orientalists,  
(1935), pp.603-606.

--- 'Bankers' accounts from the eleventh  
century A.D.', JESHO, 9 (1966), pp.28-68.

--- 'Slaves and Slavegirls in the Cairo  
Geniza records', Arabica, 9 (1962),  
pp.1-20.



- Goitein, S.D., 'Islamic banking in the light of the Cairo Geniza Documents', Atti del terzo congresso di Studi Arabic e Islamici (1967), pp. 371-3.
- Gardet, L., 'La propriete en Islam', IBLA, 10 (1947), pp.109-135.
- Grohmann, A., 'New discoveries in Arabic Papyri. An arabic tax account book', BIE 32 (1949-50), pp.159-170; 35 (1962-3), pp.159-169.
- Grünebaum, G.E.von, 'Aspect of Arabic urban Literature mostly in the ninth and tenth Centuries', And, 20 (1955), pp.259-281.
- 'Observations on city Panegyrics in Arabic Prose', JAOS, 64 (1944), pp.61-65.
- 'Arabic Literary criticism in the 10th century A.D.', JAOS, 61 (1941), pp.51-7.
- Hamidullah, M., 'Islam's solution on the Basic economic problems', IC, 10 (1936), pp.213-233.
- Herzfeld, E., 'Über die historische Geographie von Mesopotamien. Ein Programm', PGM 55 (1909), pp.345-349.
- Imamuddin, S.M. 'Bayt al-Mal and Banks in the medieval Muslim World', IC, 35 (1961), pp.12-20.
- Jean, David-Weill, 'Papyrus Arabes du Louvre', JESHO, 8 (1965), pp.267-311.
- Jāsir, H. al-, 'Kitāb al-Jawharatāin al-'Atīqatāin', MMIA, 26 (1951), pp.533-44.

Khaṣbak, J.H. 'Aḥwal al-'Irāq al-iqtisādiyya fī 'ahd al .

Ilkhāniyyin', Bulletin of the College of Arts, University of Baghdad, 4 (1961), pp.117-172.

Kister, M.J., 'The Social and Political implications of three traditions in the Kitab al-Kharaj of Yahya b. Alam', HESHO, 3 (1960), pp.326-334.

--- 'Notes on three Arabic MSS. in the British Museum', BSOAS, 23 (1960), pp.390-2.

Lambton, A.K.S., 'Reflections on the Iqṭā', apud Makdisi, Arabic and Islamic Studies (1965), pp.358-376.

--- 'An account of Tarikh-i Qumm', BSOA, 12 (1948), pp.586-596.

--- 'The merchant in Medieval Islam', A Locust's Leg Study in honour of S.H.Taqizādeh, (1962), pp.121-130.

Laoust, H., 'Le Hanbalisme sous le Califat de Baghdad', REI, 27 (1959), pp.67-74.

Lassner, 'The Ḥabl of Baghdad and the dimensions of the city: A metrological note', JESHO, 6 (1963), pp.228-9.

--- 'Notes on the Topography of Baghdad: the systematic descriptions of the city and the Khatīb al-Baghdādī', JAOS, 83 (1963), pp. 458-469.

Lesz, G.M., and Falcon, N.L., 'The geographical history of the  
Mesopotamia Plains', GJ, 118 (1952),  
pp. 24-39.

Le Strange, 'Ibn Serapion's description of Mesopotamia and Baghdad',  
JRAS (1895), pp. 1-32, 255-74.

Levey, Martin, 'The Book on Poisons of ibn Waḥshiyya and its  
relation to early Indian and Greek texts',  
The American Phil. Society, 56 (Nov. 1966),  
pp. 115-127.

Levy, R., 'Notes on costume from Arabic Sources', JRAS  
(1935), pp. 319-38.

Lewis, Bernard, 'An apocalyptic vision of Islamic history',  
BSOAS 13 (1950), pp.308-38.

----  
'The Islamic guilds', Econ.H.R.,  
8 (1937), pp.20-37.

----  
'Studies in the Ottoman archives',  
BSOAS 16 (1954), pp.469-501.

----  
'The use by Muslim Historians of non-  
Muslim Sources', Historian of the  
Middle East, ed. B. Lewis and P.M.Holt  
(1962), pp.180-191.

----  
'The Ottoman Archives as a Source for  
the History of the Arab lands', JRAS  
(1951), pp.139-155.

Lewis, Bernard, 'Government, Society and economic life under the Abbasids and Fatimids', Cambridge Medieval History, 2nd ed. (1966), vol. IV, pt. I, pp. 638-661.

---  
'Sources for the economic history of the Middle East', A Paper submitted to the Conference on the Economic History of the Middle East at S.O.A.S. (July, 1967).

Lewis, B., and Holt, P.M., 'Introduction', Historians of the Middle East (1962), pp.1-19.

Lombard, M., 'L'or Musulman du VII<sup>e</sup> au XI<sup>e</sup> Siècle', Annales E.S.C. (1947), pp.142-60.

Majid, S.A., 'Waqf as family settlement among the Moḥammadans', JSCL, 9 (1908), pp.122-41.

Minovi, M. and Minorsky, V., 'Naṣīr al-dīn Tūsī on Finance', BSOAS, 10 (1940-1942), pp.755-789.

al-Naqshabandi, 'al-Dīnār al-ʿAbbāsī', Sumer (1946), pp. 235-56.

---  
'al-Dīnār al-Islāmī', Sumer (1945), pp. 115-35; Sumer (1947), pp.270-75.

Nelson, H.S., 'An abandoned irrigation system in Southern Iraq', Sumer (1962), pp. 67-72.

Osman, S.A.I., 'Mu'taṣim and the Turks', BSOAS (1966),

pp. 129-140.

Pellat, Ch., 'Gāhiz à Baghdad et Sammarā', RSO, 27 (1952),

pp. 47-67.

---

'Le traité d'astronomie Pratique et  
de météorologie populaire d'Ibn

Qutayba', Arabica, I (1954), pp.48-88.

---

'Gāhiziana, I. Le Kitāb al-tabassur  
bi-l-tiḡara attribué à Gāhiz',

Arabica, I (1954), pp.153-165.

Petrushevsky, I.P., 'The Socio-Economic Condition of Iran

under the Il-Khāns', The Cambridge History  
of Iran, vol. V (1968), pp.483-537.

Poliak, A.N., 'La féodalité Islamique', REI, 10 (1936),

pp. 247-265.

---

'Classification of lands in the Islamic  
law and its technical terms', AJSLL

(Jan.-Oct. 1940), pp.50-62.

Qazzaz, W. al-, 'The 'Abbasid Dirham', Sumer 18 (1962), pp.129-40.

Rogers, E.T., 'Notice on the dinars of the 'Abbasid Dynasty',

JRAS, 7 (1875) pp.262-304.

Saarisalo, A., 'A Waqf - Document from Sinai', SO, 6 (1933),

pp.6-26.

Schacht, J., 'Early doctrines on Waqf', Mélanges Fuad KÖRÜLLÜ

Istanbul (1953), pp.443-452.

Schacht, J., 'Sur l'expression "Sunna du Prophète", Mélanges

H. Massé (1963), pp.361-365.

----

'The revaluation of Islamic Traditions',

JRAS (1949), pp.143-54.

Sergeant, R.B., 'Material for a history of Islamic textiles up

to the Mongol conquest', AI, 13-14

(1948), pp.75-117.

Sharon, M., 'A waqf inscription from Ramlah', Arabica, 13

(1966), pp.77-83.

Sourdel, D., 'Problèmes de l'histoire du Vizirat 'Abbāside

(132/749 à 324/936)', 24th Int.Cong.Or.

(1957), pp.370-372.

----

'Nouvelles recherches sur la deuxième

partie du livre des vizirs d'al-Gahsiyari<sup>V</sup>',

Mélanges. L. Massig., 3 (1957), pp.271-299.

----

'La Politique religieuse des Successeurs

d'Al-Mutawakkil', SI, 13 (1960), pp.5-21.

----

'L'originalité du Kitāb al-Wuzarā' de

Hilāl al-Ṣabī', Arabica, 5 (1958),

pp. 272-92.

----

'Fragments d'al-Sulī sur l'Histoire

des vizirs 'Abbāsides', BEO, 15 (1955-

1957), pp.99-108.

Udovitch, A.L., 'Credit as a means of investment in medieval  
Islamic trade', JAOS, LXXXVII (1967),  
pp.260-264.

Yusuf, S.M., 'Land Agriculture and Rent in Islam', IC, 30 (1957).  
pp.27-39.